Isaac Norris Jr.
2. 3. 53.

Lecture by Dr Nathan Chapman

## TRANSFUSION OF THE BLOOD.

The Courrier des Etats Unis, of a late date, contains the particulars of a curious and interesting case which recently occurred in one of the Hospitals of Paris, and in which the blood of one person was transfused into the veins of another, and the life of the recipient saved, or at least prolonged by the operation. The patient was a woman, and after her *accouchment*, a profuse and exhausting hemorrhage followed. Her pulse had ceased to beat for several minutes, and nothing more than a slight undulatory shuddering could be perceived from time to time. She was evidently dying, and as a last resort of his art, M. Nelaton, determined to try what effect transfusion would have, which determination was soon carried out. One of the attendants, M. Defour, voluntarily offered to lose his blood in the cause of humanity, and the required quantity being taken from his arm, it was injected from a syringe into a vein of the head of the patient, and passed immediately into the system. The blood was injected at about its natural temperature. The whole quantity was from thirteen to fourteen ounces. There were two injections, the first of about eight ounces, and after an interval of five minutes, five or six ounces more. The woman revived immediately, and was doing well for a week after the operation, when she was carried off by inflammation of the bowels. The transfusion was considered to be, however, perfectly successful.

The Washington Globe, alluding to the circumstance, says that transfusion of the blood was tried in England and France nearly two hundred years ago, and after being a medical hobby for a few years, fell into disrepute, and was altogether abandoned. At Paris it was prohibited, on account of some unsuccessful experiments, and Perrault, a distinguished anatomist, gave the *coup de grace* by a *bon mot*. A man could not change his blood, he said, as he does his shirt. And so this theory, like a thousand others, was laid upon the shelf, apparently forever, until resuscitated by MM. Prevost and Dumas, about thirty years ago, who demonstrated, by experiments on animals, that blood artificially supplied by transfusion would reanimate them and restore the vital energies; but the blood transfused must be an animal of the same species of the recipient, and the physical and chemical properties the same. And it ought always to be the blood of a young and healthy person, when the experiment is to be tried on a human being. The old experimenters erred by injecting the blood of quadrupeds into the human system, and they did not employ the same degree of skill that is now employed. Within the last twenty-five years, there have been not less than ten or twelve cases of transfusion in England and Germany, and all have been successful, the accounts says. But upon the supposition that they have not all been, still, if a majority has, it is encouraging enough to justify the experiment in desperate and in very doubtful cases. If the blood of all healthy persons is chemically the same, or very nearly so, reason would seem to indicate that in cases where a deficiency in the quantity of blood in the system is what makes the danger then an artificial supply would be a natural remedy

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# Respiratory System.

## Catarrh.

Next I am to bring before you the diseases of the pulmonary organs & their appendages, as the trachea & its neighbouring parts. As among the most simple of these affections, I will commence with some remarks on catarrh.

This complaint consists in an augmented secretion from the mucous membrane of the nose, throat & bronchia, attended generally with more or less fever. Catarrh is most commonly induced by sudden vicissitudes of the weather; & hence may almost be considered endemial to the more variable climates. It may, however, be occasioned by an abstraction of a part of the ordinary clothing, by exposure to draughts of air, by sleeping in damp sheets, or in cold, wet rooms, &, indeed, by any circumstance calculated to suppress perspiration.

It is common for catarrh to commence with some difficulty of respiration, & a sensation of fulness & pain about the head which may be acute, or dull,

or heavy. These symtoms are followed by a distillation of acrid fluid from the eyes & nostrils, excoriating the parts over which it trickles. Associated with this coryza, as it is called in medical language, there is commonly some degree of lassitude & muscular soreness. A cold skin, or at least, a greater sensibility to the application of cold air, is always experienced at this stage of the complaint. These symtoms do not long continued before some hoarseness, with a sensation of roughness & soreness, comes on, accompanied with a stricture across the chest & a dry, irritating cough. Such is the ordinary character of catarrh. But, after a few days, if not ill managed, the disease subsides, the fever ceases, & next the cough breaks which is announced by the copious & easy expectoration of a thick, tenacious mucus.

Cases of this disease, however, are not very rare which, either from original violence, or relapses from indiscretion, put on a more serious & formidable character. It is, indeed, hardly ever proper to neglect a cold, especially if it occur in persons of a weak chest, or that evinces any irritable tendency. What at first may seem a simple catarrh has been known to terminate in some one of the

* In children a species of bronchitis sometimes ensues. There is more hoarseness & wheezing, not so much fever or pain - Expectoration slight. Sometimes there is dyspnoea. These symtoms soon remit for a time, but return more aggravated. Signs of disturbed circulation appear, as livid face & lips - the patient becomes comatose & dies.

† Asthma & Hydrothorax are among the consequences. Dissections show an inflammation of the lining membrane, & effusions of coagulable lymph, & congestion of the lungs.

anginose affections, & even to extend to the lungs themselves, exciting active inflammation of these organs. Cynanche tonsillaris is not unfrequently an accompaniment of catarrh in children; & we often see this disease eventuate in the worst forms of peripneumonia notha in advanced life. But bad as are these more immediate effects, they are of little consequence when compared with the dread of pulmonary consumption from this disease. Of the cases of this horrible malady which occur in every country, a very large proportion, I presume, may be directly traced to neglected or ill managed catarrhs.

As in most other diseases, the remedies for catarrh may be divided into such as are proper in the forming stage, & such as are to be employed when the case becomes confirmed. My own experience informs me that nothing answers so well to suppress an attack of this complaint as a moderate dose of **laudanum** or **opium** taken on going to bed. I have tried it 100 times on myself & still oftner on my patients, so that I cannot possibly have any doubt as to its efficacy. It excites an universal glow over the body, without producing much, & in many cases the slightest, perspiration. Determi-

* Dr. Physick recommends a fumigation of equal parts of Hoffman's Anodyne & laudanum to the external throat & lungs. An infusion of cicuta in ether answers very well. I know now nothing better than the above for loss of voice, &c.

+ made stimulating with salt, or hickory ashes.

ning from what I have remarked, I am not satisfied, that by combining diaphoreticks with opium we gain any great advantage. Opium appears to operate merely as a diffusible stimulus, overcoming, by its superior power, the feeble action of the incipient, or forming stage of the disease. This practice in the early stage of catarrh does not rest solely on my own authority. On the contrary, it is confirmed very fully by the experience of Dr. Physick, who declares that it is incomparably superior to any other remedy in that complaint.

I did believe that this practice originated in America; but in turning over a treatise on opium which was written 70 or 80 years ago by Dr. Young of Edinburgh, I found the same language with regard to this medicine in the incipient stage of catarrh, as I have just now held to you. To that author the credit is undoubtedly due of first bringing the remedy, under such circumstances, into notice. But when we are precluded from the use of opium, either by the prejudices of the patient, the idiosyncrasies of his constitution, or by any other cause, it will be right to resort to the prudent use of sweating.* For this purpose we should employ the milder methods, as pediluvium+, or the internal admin-

* Molasses whey is likewise good. It is made by curdling milk with molasses. Vinegar whey, or any thing else that will excite sweat. Vinegar whey is good for hoarseness, either during or following a cold. Molasses whey is particularly useful in hoarseness. An infusion of the eupatorium.

† Calomel purges preferable at the commencement – afterwards the neutral salts.

istration of some mild diaphoretick, as nitre & antimonial wine, the action of which should be promoted by the use of warm beverages, and particularly by hot lemonade.*

After, however, the catarrh is completely formed, it exacts for its treatment, measures infinitely more energetick & decisive. The colds which occur in every part of our climate, if they assume any degree of violence, are difficult of cure, & require to be managed by the employment of V.S. The quantity of blood to be detracted & the interval at which the operation should be repeated, depends on the pulse & other circumstances of the case. As a general rule, however, a single bleeding, if copious, will be sufficient; though I have seen the disease refuse to yield to the loss of 100 ounces at different times. As auxiliary to the lancet purging should be early resorted to, & the saline articles are universally preferred.† Either of the neutral salts, as sulphate of soda or Epsom salts, may be employed, & will answer alone, or, what is better, in combination with nitre & tartar emetick in the proper proportions. Judging from my own personal observations, I should prefer the following mode of administering them.

* It may be dissolved in 3 or 4 ounces of water, & a table spoonful given occasionally.

℞. Sulphat of Soda ℥j
Nitrat of Potass ℈ij to ℥j
Tart. Antimony gr ss or gr j ⁜

Divide the whole into 4 powders, & give one every hour, or two hours, so as to keep the bowels open.

It has been a favourite practice with many physicians to manage catarrh exclusively with the antimonial preparations with the view to their nauseating properties. All our speculations relative to the disease, warrant this course of practice. Colds are accompanied with constriction of the surface, and nothing is calculated to relieve this so effectually as nausea properly induced. It is much the fashion, in Great Britain especially, to treat the catarrhal affections, which prevail there to a greater extent than in any other part of the world, on the plan just alluded to. But whatever may be the success of the practice elsewhere, it would certainly not answer in the catarrhs of our own country. As regards the United States, the complaint of which we are treating, is characterized by the highest grade of active inflammation, & for its cure demands the most direct & efficacious depletion. Effects infinitely more striking & decisive are produced by **emetics** given so as to produce vomiting, than from nauseating doses of the same article. Exhibited

early in the disease, there are indeed few cases which would not be entirely removed, or exceedingly mitigated, by these remedies. They are, however, exceedingly unpleasant, &, except in cases of children, can seldom be employed. Even with children they should not be resorted to when the attack is so far advanced as to produce pain & inflammation about the chest. Under such circumstances **V.S.** is alone adequate to the case, & can never be dispensed with. After sufficient blood has been withdrawn, & the bowels have been put into a soluble condition, the **nitrous powders** repeated at stated intervals, will be found very beneficial. Not a little confidence has been reposed in the vesicating applications in the catarrhal affections. Properly applied, **blisters**, undoubtedly, may be advantageous, & sometimes are of the very first necessity. Much inconvenience as well as injury, will, however, accrue, if they are put on too early. They are apt to distress the patient exceedingly as long as much cough exists, & serve not to alleviate, in any degree, the force of the complaint. In the declining stage, when there is a hard lingering cough, attended with much pain about the chest **blisters** may be directed with unequivocal utility, & often cannot at all be dispensed with.

All of you know how much certain preparations called cough mixtures are employed in cases of catarrh. There is hardly a family which has not some nostrum of the kind which is brought forward, on all occasions, in a tone of sufficient confidence. Numerous & diversified as are these mixtures, they always contain as a leading ingredient, **Opium** either in the shape of **laudanum** or **paregorick**. It is obvious that such combinations **cannot** be **indiscriminately** resorted to with advantage in all cases of catarrhal affections. Before the violence of the attack is broken, which is evinced by looseness of the cough & the freedom of expectoration, my experience informs me that they are highly mischievous. They produce, for the most part, increased tightness of the chest, head ache, & an aggravation of all the febrile symtoms. After, however, the disease has reached that period to which I have before alluded, these mixtures are not only beneficial, but are the most important of our remedies. I shall not pretend to detail all the formula which are employed, but shall content myself with mentioning those which I consider as the best suited to the circumstances of the case. As a means of promoting expectoration & allaying the irritation which

+ This is the brown mixture

causes the cough, I know nothing which is so generally successful as the following prescription.

Take Extract of Glycyrrhiza ℥ij iij
Aqua Bul. . . ℥iij iv
Rub them well in a mortar & add
Spts. Nit. Dul. . . ℥ij
Vin. Antimo. . . ℥j
Tinct. Opii . . gut. xl or L 30 a 40 +

Shake the mixture well & let a table spoonful be taken every 2 or 3 hours according to circumstances.

The formula which I am now about to mention will, sometimes, answer very well

℞. Sal. Tart. . . ℥ij, j
Vin. Antimo. . ℥j
Tinct. Opii . . gut. xl or L 30 a 40
Spts. Lav. Comp. ℥ij
Aqua. . . . ℥iij iv a v

The dose & manner of administration are precisely as in the former case. In most instances advantage may also be derived from the following prescription.

℞. Oxymel or Vin. Scillæ ℥j
Vin. Antimonii . ℥j
Spirt. Nit. Dule. . ℥ij
Tinct. Thebai . . gt xL
Gum. Arab. . . ℥ij
Aqua . . . ℥iij iv

Sugar dissolved in a small quantity of vinegar, heated, & made into a thick syrup very good – Dose ℥ss

Another.

℞. Gum. Arab. ℥j
Cream. Tartar ℥j ℥j
Sugar Candy ℥j
Boiling water ℔ ij

After the catarrh has become protracted, & the symptoms of inflammation have wholly disappeared, you may resort to the balsamick medicines with unequivocal utility. I shall say more of these hereafter, & at present shall only observe that the **balsam of Tolu** always answers best. It may be administered in the following manner.

℞. Tinct. Tolu. ℥j
Tinct. Digit. ℥j, Tinct. Opii ℥j

Forty or fifty drops of this mixture dropped on loaf sugar, & dissolved in half a wine glass full of water, may be taken 4 or 5 times a day. It is especially beneficial in the catarrhs of old people.

I have thus detailed the remedies, applicable to the management of catarrh in every stage. But little will be accomplished, at any period of the disease, by the remedial treatment, unless a strict antiphlogistick course be pursued. As relates to the diet, it should be of the lowest discription, consisting principally of the

demulcent drinks, as barley water, flaxseed tea, loaf sugar & water, mucilage of gum Arabic, &c.; all of which may be rendered more agreeable by being moderately acidulated with vinegar, or with lemon, or lime juice. It is important that while these afford nourishment to the patient, they are not destitute of utility in relieving the more distressing symptoms of the disease itself. It is my desire to impress on your minds more particularly, the necessity of an attention to diet, as the common prejudices of mankind, strengthened, in many instances, by physicians themselves, have been against it. To feed a cold & starve a fever has, for a long time, been a common aphorism, & like many other vulgar aphorisms, is founded in error, & if carried into practice, would prove injurious. We know that catarrh is a fever, & a fever too of a highly inflammatory description. Let me, therefore, repeat to you the importance of resorting to a low diet in these cases. Even when more is required than merely the demulcent drinks, vegetable matters should be the only substances allowed. Rice, turnips, potatoes, hommony, & the vegetable broth, are all that should be admitted in the inflammatory cases of catarrh.

+ 3 pints of water to be boiled down to one pint

‡ Rice or barley may be boiled into a jelly.

Burgundy pitch plaster on the breast is an excellent preventive.

The **vegetable broth** is particularly useful, & may be prepared in the following manner.

Take 2 turnips, 2 potatoes, 2 onions, a little celery, & a slice of bread: to these add ½ a gallon of water, & boil for a few hours, or till the texture of the vegetables shall be destroyed. Strain & after adding a little salt, pour it over dry toast. This is more palatable than weak animal broths, & is preferable in a medical point of view.

The **vegetable jelly** is also a useful article of diet for those affected with inflammatory complaints. To prepare it, take ℥j of **gum Arabic**, ℥j of **sugar**, & a sufficient quantity of water, & reduce them to a jelly. To this add a small quantity of lemon or lime juice, & the patient will be unable to distinguish it from calve's feet jelly.

# Catarrhus Epidemicus, or Influenza.

I shall next mention the remedies in catarrhus epidemicus. This, perhaps is the most wide spreading disease with which we are acquainted. Not only does

it affect a particular country; but, in some cases, extends its influence over every habitable portion of the globe. By the Italians, on this account, it was denominated Influenza, a term by which the disease is, at present, universally recognized. Ever since the earliest medical records, this complaint appears to have existed. It was accurately described by the antient writers, & since may be traced down to the latest period of its occurence. As regards its course, we shall find it generally to have proceeded from north to south; though sometimes it has pursued an opposite direction. Between the common catarrh & influenza, a striking analogy exists in many respects. There is this difference, however, in relation to their origin; that catarrh evidently arises from the sensible qualities of the air, while the influenza depends on some unknown distemperature or variation of the whole atmosphere — upon that state which produces epidemicks generally. Contagion, it is true, has been alleged as a cause of the disease, & there are not wanting some respectable authors by whom it is ascribed altogether to this source. But I have reason to believe, that this sentiment is wholly gratuitous; & it is undoubtedly contradicted by an immense weight of evidence

of a nature direct & conclusive. It is stated, that during the prevalence of influenza, persons entirely sequestered from all communication with others, as the patients in a hospital, or the inhabitants of monasteries in catholick countries, have, all at once, been attacked with the disease. Independent of this fact, the complaint is uniformly distinguished by all those circumstances which are common to epidemicks occurring at stated intervals, sweeping with prodigious rapidity over whole countries, & compelling all the subordinate affections to bend to its influence & acknowledge its supremacy. Like the other epidemicks it also appears in the varied character of inflammation, or of typhus malignaty. Most generally it exhibits the symtoms of ordinary catarrh, with some degree of aggravation, & demands the same discription of remedies, accommodated, however, to the greater violence of the case. But when it puts on the typhus condition, which it seldom does, the practice, of course, must be different. In this case the treatment is similar to that employed in the late winter epidemick, consisting of moderate blood letting, and active diaphoretick measures.

+ When the disease is seated in that part of the pleura which covers the convex surface of the diaphragm, it is called *paraphrenitis*; because it is attended with delirium & risus sardonicus.

The influenza, more particularly in the United States, appears more than once, especially in the southern section of our country, to have been attended with bilious symtoms, & to have put on the general character of the diseases of that climate. When it assumes this appearance, the symtoms are always to be regarded as merely accidental; though it appears that emetics & mercurial purges are much demanded, and are highly serviceable in the cure. But, generally, speaking, the influenza must be considered as a highly inflammatory catarrh, & as demanding exactly the same remedies, urged to a greater extent.

# Pneumonia.

From the catarrhal affections, I pass on to the consideration of the nature & treatment of pneumonick inflammation. By some of the nosological writers, a great variety of cases is made out of this morbid condition of the pulmonary organs. The pleura being inflamed, the disease is called pleuritis or pleurisy. When the parenchyma or substance of the lungs is affected, the title is changed

× Pneumonia vera { Pleurisy.
Peripneumony.

Pneun

to peripneumonia or peripneumony. An engorged or suffocated state of the lungs has been denominated peripneumonia notha or bastard peripneumony; & a rheumatick affection of the pleura, or intercostal & other contiguous muscles, is known by the appellation of pleurodine or spurious pleurisy. This, however, is a distinction infinitely too minute & artificial to be retained in actual practice. Of pneumonick inflammation I shall treat under the general division of pneumonia vera & pneumonia notha.* The first of these embraces pleurisy & peripneumony. There may be some difference between the two cases: though, as they are described by Cullen who is very fond of this split-hair division of diseases, there is no diagnostick by which they can be discriminated: & even if there were, it would not be at all material as regards the mode of cure. Whatever may be the precise seat of pneumonia, it may always be recognized by the pyrexia, difficult respiration, dry cough, & pain in some one part of the thorax, either on one side or the other, or in the breast. But these symptoms on different occasions are variously modified. The generality of writers say that the pain is most commonly in the

+ But above all by a copious discharge of puriform matter by expectoration.

right side: but determining from my own experience, I should, without hesitation, decide that the contrary is the case. In my whole practice, though I have had much to do with this disease, yet I have never seen it occur more than half a dozen times in the right side.

The unfavourable symtoms are high fever; delirium; short, laborious respiration; the patient raising his shoulders upon inspiring; a cough without expectoration; sudden prostration of strength; livid face & lips, indicative of obstructed circulation.

The favourable symtoms are the reverse of these. Gentle sweating; the urine depositing a copious sediment, & some critical discharge, as diarrhoea.

Dissections show the vessels of the pleura injected; effusions of coagulable lymph, forming adhesions; accumulations of phlegm or mucus, & sometimes blood, in the substance of the lungs; &, sometimes abscesses; gangrene; or effusions of water, forming hydrothorax, &c.

As regards the causes of pneumonia, they are very nearly the same with those of all other internal inflammations. The chief of them are vicissitudes of the weather, and the direct applica-

tion of cold in any way to the body, especially if it has been previously heated. The disease commonly selects as subjects of its attacks, persons of robust make & vigorous health, & possessing an inflammatory diathesis of constitution. Most generally it occurs in the winter & spring, more especially when the seasons are variable and unsettled.

Of all the diseases to which the human frame is liable, with the exception of cynanche trachealis, this is, perhaps, the best understood & most easily managed. Common pleurisy is a case of high & active inflammation in which the indications are very few, very simple, & perfectly intelligible. Nor, so far at least, as relates to the early stage of the complaint, can there be any doubt as to the choice of remedies. Every practitioner in whatever school he has been educated, concurs in the propriety of prompt & **copious venesection**. Even the prejudices of mankind are enlisted in favour of this practice. This indeed is so much the case that strong as may be the opposition to bleeding in any particular instance, give to the disease the title of pleurisy, & every objection & prejudice is at once removed.

Called, therefore, to this complaint in the early stage, I make no hesitation in drawing blood very freely. To do this, however, with greater effect, the orifice should be large, so as to allow a bold and vigorous stream to flow. No fact, perhaps, is better ascertained in the whole compass of practice of physick, than that in the reduction of inflammatory action, more is obtained by the suddenness with which blood is detracted, than by the quantity taken. It is alleged by Fordyce that this is so much the case that 10 ounces of blood taken as speedily as possible will produce as great an effect as double the quantity drawn slowly away tho' a minute orifice. It is important that you should bear in mind a fact so interesting both in a speculative & practical point of view. A full illustration of this doctrine may be found in the 4th dissertation of Sir George Fordyce on fever. It is not easy to indicate any exact rule for the use of the lancet in these cases. It may be remarked that more is to be apprehended from a limited & restrained employment of it than from any excess of depletion. I repeat it, infinitely more harm is done in the management of pneumonick inflammation

by a limited employment of the lancet than by any excess of it. Generally speaking, I should say that in a stout adult subject, with a confirmed pleurisy, where there is a strong pulse, & much pain & difficulty of respiration 30 ounces of blood are about the proper quantity to be taken away at the first operation. Even this will not always answer; & in a few hours we shall be called by the urgency of the symptoms to repeat the bleeding, sometimes to the same extent as at first, though this is seldom necessary. There is in this complaint, when we are called at the very onset of the attack, a guide to which we may safely trust. It is my practice never to tie up the arm in a violent case of pleurisy till the pain remits & the respiration is relieved. Whether 15 or 30 ounces of blood be necessary to be drawn to accomplish this purpose, is a matter of no sort of consequence to me.
But this rule does not apply with equal force to the advanced stages of the complaint. The reason is very obvious & may be readily explained. After pleurisy, as any other case of common inflammation, has continued for a few days, the capillary vessels which, as I formerly

told you, are, to a certain extent, independent of the heart & arteries in their action, become affected; & no portion of blood detracted from the general circulation, will be productive of any, or at least of much effect on the local affection. Of this law of pathology which, so far as I know, has never been enforced by any but myself, many striking illustrations may be produced. The whole order of phlegmasia afford a proof of it, as well as of the propriety of the practice which it suggests. To whatever extent we may carry V.S. we shall hardly ever be able to cure ophthalmia or rheumatism, without resorting to local bleeding, or to some other means of making a local impression on the capillary vessels. The same is the case with regard to pulmonick inflammation. Nevertheless we should not too hastily withhold the lancet. The diseases of the lungs for several reasons & especially because the circulation of the blood is through these organs, require greater depletion for their cure, than those of almost any other part. It is also true that in pneumonick inflammation, the loss of blood is infinitely better borne than, perhaps, in any other disease.

20, 30, or 40 ounces do less towards debilitating the patient in inflammation of the lungs than half the quantity taken away in almost any other case. This is so much the fact, that it is utterly impossible to induce syncope or fainting in pneumonia; I speak, of course, of the commencement of the attack. I have sometimes detracted 40 or 50 ounces of blood without producing the least tendency to syncope.

Being perfectly satisfied that the force of the circulation is sufficiently reduced, we next resort to local remedies. Of these by far the best are the vesicating applications. But there has always been much difference of opinion among practitioners as to the exact period at which they should be used; & by some authors of respectability, it is utterly denied that they are useful under any circumstance of the disease. Of the efficacy, however, of blisters there can be little doubt, if they are rightly timed. My own practice which I have reason to believe is sanctioned by the best authority of the present day, is uniformly to postpone the application of blisters till a considerable reduction of arterial action has

been accomplished. At this conjuncture, blisters are unequivocally useful by extinguishing the remnant of pain still existing in the chest, & by arresting the further progress of the disease. But when early resorted to, they never fail to produce great distress to the patient, & to aggravate the symtoms they were intended to relieve. Candour, however, compels me to acknowledge that a decidedly opposite course has been adopted by some of the ablest practitioners in this country & elsewhere; & that they also have been led to their conclusion from experience. It is the practice of Dr. Griffitts of this city, one of the oldest, most experienced, & most judicious of our physicians, to make use of blisters in pneumonick inflammation at his first visit. In many cases he does not even wait for the previous use of the lancet, employing blistering & bleeding contemporaneously. This is also the practice of Dr. Jackson of Boston who holds the professorship of the practice in the medical school of that city, & who is, undoubtedly one of the ablest practitioners of this, or any other, country. He assured me that he & the other

physicians to the eastward, make use of vesicating applications in the early stage, and derive great advantage from the practice. To all this I have only to reply, that the counter evidence on the subject preponderates, & my own personal experience, which I will never surrender up to any authority, tells me that the course which I recommend to you is sound & consistent practice. In violent cases of pneumonia before the application of blisters, we shall derive very great benefit from the use of **leeches & cups** to the affected part. Such depletion in this case, sometimes operates like a charm & should again be recurred to at any of the subsequent stages of the complaint, with more or less efficacy. To this point, the use of topical depletion in pneumonick inflammation, I wish to call your attention particularly. It frequently happens in the progress of the disease that after using the lancet as fairly as the strength of the patient will allow, there still remains considerable action in the pulse with a good deal of pain, indicating the existence of not a slight topical affection. It is under these circumstances that the loss of 6 or 8 ounces of blood

by cups applied to the side, sternum, or breast, produces on the disease the most beneficial impression. I have seen this remedy again & again employed, & I have never been better satisfied of its beneficial operation than I am at present. But when these means cannot be attained, which often happens in the country, dry warmth or fomentations may be substituted with utility. The best means of applying heat, is by bags filled with heated salt, ashes, oats, corn, or some such article.

As yet I have said nothing of purges in this disease, a remedy so useful in active inflamation. But, as I have previously more than once stated, the pulmonary affections, in a greater or less degree constitute exceptions to this general rule. Not one of them will bear copious evacuations from the bowels, & as relates to pleurisy, particularly, all that is to be done, is to keep the bowels soluble by mild laxatives, as castor oil, or the neutral salts.

Much more confidence has always been reposed in diaphoreticks; & reasoning on the nature of the case, we should, indeed, be led to the conclusion that they are particularly well suited.

But experience has taught us, that, except in the forming stage of pneumonick inflammation, they are useless, or even manifestly injurious. My impression is, that copious sweating induced exactly at the time the attack commences, will entirely put it off, or very considerably alleviate its violence. Of the diaphoreticks employed in the early or forming stage of the complaint, the one chiefly depended on is the asclepias decumbens, or pleurisy root. It is now nearly a century since this root was introduced into practice, & the whole current of subsequent experience greatly tends to confirm the early attestations in favour of the remedy. My experience with the article under such circumstances, enables me to speak with confidence of its powers. As a diaphoretick it is distinguished, to a great degree, by the certainty & permanency of its operation; & it also possesses this valuable property, that it produces its effect without raising the temperature of the surface & thus creating inquietude & restlessness. On this account it is well adapted, not only to the forming stage of pleurisy, but also to all inflammatory complaints. During the progress of the disease, however, diapho-

eticks should rarely, if ever, be prescribed; and only such remedies should be resorted to as are suitable to cooperate with V.S. in directly reducing the force of the circulation. Combinations of antimony & ipecacuanha with nitre or calomel, are usually selected for this purpose, and though they are not given with the view of creating nausea, yet I am not aware that a slight effect of this kind is productive of any disadvantage: It has, indeed, a contrary tendency; & by unmoving the structure about the chest, & promoting expectoration, it may be beneficial. As soon as the cough is loosened, & a free expectoration has appeared, you may consider the disease as broken, & resort to the demulcent drinks, & the cough mixtures enumerated on a former occasion; & in every respect treat the case as if it were a catarrhal affection — The demulcent drinks & cough mixtures, mentioned under the head of catarrh, are equally applicable to pneumonick inflammation.

But sometimes it happens that, after the violence of the symtoms has abated, a tightness of the chest; a hard, dry cough; difficult & penurious expectoration, & some slight pain

still continue. In the cases where this occurs, I have seen nothing so useful as combinations of Opium, ipecacuanha & calomel in the quantity of gr ss each, repeated at stated intervals. Even if the medicine should excite salivation, which it sometimes does, this can be no objection to the practice; but, on the contrary, it more commonly exterminates every vestage & remnant of the pulmonick affection. I do not know whether it would not be prudent & useful practice to induce a moderate ptyalism after the violence of the inflammation has been subdued by the directly depleting remedies. A salivation would obviate a relapse by doing away the predisposition to the disease; &, after having accomplished this effect, would guarantee the system against pulmonary consumption, hydrothorax, & other pectoral complaints.

My practice in ordinary cases of inflammation of the lungs, I have now detailed to you. But the disease assumes a variety of forms, and differs greatly in the degree of violence. It is impossible for me to particularize all the modifications, & to give a detail of the treatment appli-

+ This is a disease of winter

× So violent is the headach, that it has been denominated plurisy of the head.

o A nauseous taste ".

cable to the case. I shall effect enough by giving you general rules, & leaving the rest to your own experience & sagacity.

# Bilious Pleurisy.

There is one variety of pleurisy very properly designated by the title of bilious, which so often occurs in our country & so often proves fatal, that it must not be altogether overlooked.

To all the characteristicks of ordinary pneumonick inflammation are added, in this case, many of the symtoms of the common autumnal bilious fever of our country. It is accompanied with headach, red eyes, a turnid countenance, much gastrick distress, a violent vomiting of black bile, a dark furred tongue, & pain in the hepatick region. It differs also from the ordinary forms of pleurisy in having less activity of inflammation, & in not bearing to the same extent direct depletion. As the disease usually presents itself, the system is often manifestly depressed by one or two bleedings. It is the common practice in bilious pneumonia, when this hap-

pens to desist from V.S.; & after having evacuated the alimentary canal by emeticks & mercurial purges to follow these up by draughts of the infusion of Serpentaria. This last medicine is given in order to excite & keep up for 12 or 24 hours a copious perspiration. This article appears to be peculiarly well adapted to the case on several accounts. The bilious pleurisy is most commonly met with in miasmatic countries where intermittent or remittent fevers prevail & retains to a certain degree at least the intermittent type one of these. The serpentaria which is so excellent a remedy in this form of fever, must also be useful in the pleurisy of which we are treating. Snake root, moreover, as you well know, is among the best remedies for checking bilious vomiting. Besides, while it fulfils these indications, it is also an admirable tonick & diaphoretick, & is calculated to make a new, permanent, & salutary impression on the disease. For these reasons it is, that by the common consent of practitioners, not only in this section, but also in every part of the United States, serpentaria has been so much employed in the second stage of bilious pleurisy.

But it often happens in this case, that though

* A salivation at this period is useful.
to accomplish a radical cure.

venesection is forbidden by the condition of the system, still some difficulty of respiration and not a little uneasiness about the chest remains. To do away these affections it is proper to resort to topical depletion by leeches, or, what I think still better, by **cups**. After a sufficient quantity of blood has thus been detracted, you may resort with the greatest prospect of success to blisters made large enough to embrace the whole breast.* By pursueing this course of practice, you will generally find that this species of pneumonick inflammation, is quite as manageable as the common forms of pleurisy & peripneumonia.

# Peripneumonia Notha.

We have now come to the consideration of peripneumonia notha or bastard peripneumony. Much difference of opinion has always prevailed, both as regards the nature & treatment of this disease. The fact is, that two diseases differing in their nature, & requiring, in some degree, opposite remedies, have hitherto been strangely confounded under one

1826. F.C. gave this on 20 inversion

+ All which may be coloured by Blood

Trachea similarly affected

Heart

Brain is engorged with Blood.

+ Lungs if a dark hue are of a compact solid consistence,

Respiratory Tube.

general title. The first of these cases is known by the name of catarrhus nothax or catarrhus suffocativus. It commonly attacks persons advanced in life, or of a feeble & debilitated constitution. This disease is distinguished by the suddenness of its onset, by the painful and laborious respiration, by a weak & irregular pulse, & by a prodigious accumulation of mucus or phlegm in the bronchia, which the patient is unable to discharge. The surface is cold & damp, & generally some livid spots make their appearance: there is little or no pain in the chest, but great tightness: sometimes this oppression comes on periodically like asthma, producing, in some cases, even an utter loss of voice.

Dissections show the bronchia filled with fluid, as pus, mucus, or coagulable lymph. There is seldom much inflammation of the lungs, though sometimes the pleura is affected; &, occasionally, the inflammation extends to the liver stomach and peritonium.

The prognosis is unfavourable when the attack is violent, attended with great oppression at the chest without expectoration

The pathology of the disease is this: The lungs

× There is inflammation of the mucous membrane lining the air cells, &c. this leads to extravasation
Hence dyspnea &
× ℭ Impaired.

being filled with mucus, the blood is unable to circulate through them to become decarbonized.*

Children are sometimes liable to this disease. It generally comes on like a catarrh, with great wheezing & not much ~~pain~~, cough, or expectoration.

The immediate cause of these symtoms is an extreme atony or debility of the pulmonary organs. Moderate **V.S.**, if the system be not too much prostrated, is here very serviceable. But it is always necessary, under such circumstances, to be cautious with the lancet, & never, at one time, to urge it to any considerable extent. Cups often preferable.

If V.S. is not at all admissible, or though resorted to has proved unavailing, **emeticks** are to be administered. Not a little ~~a little~~ advantage is here derived from active **vomiting**, as by means of it we dislodge the morbid congestions of the bronchia & thus relieve the other affections. Either ipecacuanha, or white vitriol should be selected for the purpose. Each of them is characterized by great promptness of operation, & by other properties which render it peculiarly well

X

+ relieving the inflammation as well as
Purging recommended afterwards with Calomel?

adapted to meet the present indication. After the operation of the emetick **blisters**, large enough to cover the surface of the chest, should be applied. They often prove very useful, by imparting tone to the lungs; & though not adequate to the entire removal of the more violent symtoms, they hardly ever fail to induce an infinitely more comfortable state of things.

But in some cases where there is very great oppression, & we are altogether precluded from the use of the lancet by the entire debility incident to the case, **local depletion** may be substituted with signal advantage. This is to be accomplished by **cups** or **leeches**, the former of which, I think is decidedly preferable. Here, as in other pectoral complaints, the cups are to be applied to the side, breast, or back.

Contrary to the practice in most of the pulmonary affections, **Opium** in this case may be freely administered in all the different stages. Never, I suspect, has it been productive of harm; & I have had reason to be extremely well pleased with its effects. Given by itself it eminently beneficial; though a more common practice

* ℞. Lac Ammon. . ℥ viij
Oxymel Squill . ℥ ij
Paragoric . ℥ ss Don ℥ss.
or
Nitric acid . ʒ j
Water . ℥ viij
add gradat. Gr Ammoniac . ʒ ij
Paragoric . ℥ ss

The dose of each is a table spoonful.
Fumigations also very good. See page

Volatile alkali given in the form of julep.
Pour a pint of boiling water on ʒj of the balsam of Tolu × let the patient inhale the vapour. Or pour the water on ℥j of Spts. Turpentine & let the patient inhale the vapour. Vide Therapeu Musk and assafoetida in Case of Spasm. vapour of Ether.

× From the dread of suffocation.

is to combine it with one of the most active expectorants, as squill, gum ammoniack, volatile alkali, seneka, balsam of Tolu, musk & assafœtida, with the other balsamic articles.*

But in the other form of the disease denominated peripneumonia to which I before alluded, the lungs are engorged with blood, not with mucus or phlegm, as in the former instance. Indeed, the complaint should be considered as a pulmonary apoplexy, & managed accordingly. This case also comes on suddenly, so much so as sometimes to exhibit no premonitory signs by which it may be apprehended. It is most apt to attack persons who are debilitated by debauchery; though sometimes it singles out as subjects of its attack, the young, the robust, & the temperate. The attending symtoms are such as might be expected from the condition of the lungs; viz. interrupted & laborious respiration; a dull heavy pain in the breast or side; a flushed, turnid countenance; a wild expression of the eyes; great anxiety & restlessness; &, when the attack is particularly vehement, a total inability to change the posture; the patient

* Pulse full, slow, interrupted & hobling, & easily compressible

not being able to lie horizontally, & requiring to be propped up in bed.+

After this detail of the pathology & symptoms, we can have no hesitation as to the course of treatment. Every circumstance indicates the propriety of prompt & most copious **V.S.** Not less blood should be evacuated, than in congestions of the brain itself. The case, indeed, is so urgent, that relief should be afforded before the closure of the orifice in the vein. I have known 50 ounces of blood to be withdrawn at once in peripneumonia Cases of this complaint do, however, occur where depletion by the lancet cannot be safely resorted to. An engorgement of the great viscera, especially the lungs, takes out of the general circulation so large a portion of blood, & confines it so closely in the organ itself, that any diminution of the quantity still circulating, is very sensibly felt by the system. This remark could not be better illustrated than by the disease before us, viz. apoplexy of the lungs, in which 5 or 6 pounds of blood are accumulated in a half stagnant condition, or at least not so rapidly circulating as usual, which may be considered as so much taken from

+ an emetick & blister

the body. Here the abstraction of 15 or 20 ounces would sometimes depress the system beyond the powers of reaction, & induce syncope or death itself. It will be prudent, therefore, under these circumstances, to draw away only a small portion at a time & then suspend the stream, to watch the effect with the view of ascertaining how the loss may be borne. If you find that the pulse is invigorated by the flow, & that the system still possesses restorative energy enough to react, you may allow the blood to flow anew. Again pursuing the same round, you should continue till you have taken sufficient to accomplish your views. On the contrary, if you find that the patient sinks under the loss of blood, you are to desist from further depletion & resort to other remedies. Topical bleeding under such circumstances, will prove singularly efficacious. It should be done by cups as I have before described.

As soon as sufficient depletion has been effected, whether general or local, it will be proper to administer large doses of Opium which tend much towards equalizing the circulation. To promote convalescence, & obviate the danger of a relapse, blisters should be largely applied to the chest.

x 3j I think: A.C.

As an auxiliary means in either form of pneumonia, the patient should be directed to inhale vapour into the lungs, especially if the case is distressing & intractable. Even the steam of water is useful: but the efficacy is increased by inhaling the vapour of some article more stimulating in its nature, as ether or balsam of Tolu. Of the latter article, take ℥j & add it to a pint of water. This should be inclosed in a tea pot, & the vapour inhaled through the spout. The fumes of turpentine or rosin are also highly beneficial. They act by rousing the lungs out of their torpid condition & enabling them duly to perform their functions.

# Cynanche Trachealis.

Continuing the history of the active affections of the pulmonary system, I will next direct your attention to cynanche trachealis.

To this disease various other names have been applied by the different writers who have treated of it. It is called suffocatio stridula, angina polyposa, asthma infantum, cynanche stridu-

Hives corruption leaves.

la, angina epidemica, morbus strangulatorius, & in popular language, croup, or hives, the heaving of the lights or lungs, the choak or stuffling, &c. The best nosological title is, Tracheitis. It clearly designates the more ordinary nature of the complaint, & at the same time gives uniformity to our medical nomenclature. It corresponds with Pleuritis, Gastritis, & all the other terms which are applied to inflammatory affections.

Croup has commonly been considered as disease of modern date, & the credit of having originally noticed & described it, is accorded to professor Home of Edinburgh, whose publication appeared about the middle of the last century. (1765) Turning over, however, one of the earliest volumes of the transactions of the Royal Society of London, I find a very distinct account of the disease, illustrated by dissections. The writer, who was an obscure practitioner, describes it as an entirely new complaint, which had suddenly appeared among the children of Cornwall, committing very considerable ravages. It is also said to be particularly noticed by Martin Ghisi, an Italian writer, so early as 1749.

+ I presume his disease to have been Cynanche Laryngea.

In advanced life.

Croup is, for the most part, confined to the early period of life, embracing the space between the first & fifth year, & affects chiefly children florid & robust. But I have known it to attack infants within the month, & also adult subjects. The illustrious Washington is said to have died of this disease.+ though I suppose to be a very large Two ladies of this city, who are now nearly in the meridian of life, I have attended in repeated attacks of croup. So strongly, indeed, are they predisposed to it, that they hardly ever escape when exposed to the causes. The same liability has been transmitted to all their children, who are now numerous.

By some writers, however, it is asserted that croup never occurs ~~under~~ above the age of puberty. That it is a rare event cannot be denied. Nor, perhaps, is the fact without explanation. The parts constituting the seat of the disease, undergo at this period, a change, as is witnessed by the new tone of voice acquired, which change enables them to resist those causes, that in the previous state of debility & relaxation of the larynx, more especially, were invited to such morbid ~~impressions~~ aggressions. Cases of this kind, however, are still to

Many situation on the sea-board

+ called Leith.

be considered as rare & anomalous deviations from the ordinary course & character of the disease.

Notwithstanding what has been so confidently alleged to the contrary, there is not the slightest reason to believe that croup is ever propagated by contagion. It would seem to arise chiefly from the influence of a moist & cold, or austere atmosphere, & hence prevails more generally in the spring than at any other season, & near to the sea, or other large collections of water, rather than in inland positions. By some writers it is affirmed occasionally to occur as an epidemick, & perhaps this may be true. It is certain that the complaint is endemial to particular places, & within very narrow limits. This is particularly the case as regards Edinburgh. It is stated that the disease is hardly known in that city, & this I believe to be the fact. But a little sea-port town, which stands about a mile from Edinburgh, is so desolated by the ravages of croup, that it is almost impossible for the inhabitants to raise their children. I am told that the same is the case as regards Baltimore. The complaint is little known in that city, while at Fells-point, which bears to Baltimore the same relation that Leith does to

+ Croup is sometimes a symptomatic or secondary disease produced by Worms This I have frequently observed. Dr Barton confirms this fact. One of the most violent cases of Croup which I have ever witnessed was entirely relieved when the child voided a worm.

Croup is also at times consequent upon a over-loaded stomach.

Edenburgh, it is extremely apt to occur.

Croup has been divided into spasmodick & inflammatory, & not a little discussion has taken place on this subject. It would seem to me, that in all cases where it suddenly attacks, it must partake of the nature of spasm. Time is required to induce inflammation, which consists in an altered action of the vessels of a part, effected comparatively by a slow process. No cause, however, more rapidly promotes it than the disturbance occasioned by spasmodick constriction. +

The early symtoms correspond with this view of the pathology of croup, & dissections fully confirm it, showing, where death promptly takes place, none of the phenomena of inflammation. But, under other circumstances, where the disease slowly approaches, or is the effect of inflammation of other parts, extending to the trachea, as sometimes happens in measles, scarlet fever, & most of the anginose affections, then it is of a contrary character, & post mortem inspections have revealed exactly such appearances as might have been anticipated.

Even, however, admitting the distinction con-

tended for, I am not aware that it leads to any practical difference. Whether spasmodick or inflammatory, the directly depleting measures will be found equally effectual in the treatment. No remedy is so prompt in the reduction of spasm of high action as venesection, & none so unavailing or inappropriate as the antispasmodick substances. On this point I wish to speak emphatically, since some of the European as well as our own writers of high authority, entertaining other notions, have laboured to establish an opposite practice, consisting in the use of musk, assafœtida, & opium, than which nothing can be more false or prejudicial.

Croup variously makes its attacks. It commonly comes on at night, & sometimes without any premonition or exposure to its ordinary causes. The child wakes up with the hoarse, dry stridulous cough peculiar to the disease, which has been aptly compared to the sharp sound of the barking of a dog, & in other instances to the crowing of the cock. Concommitant with this, there is a distressing difficulty of respiration, menacing, in some instances, suffocation, with a flushed face, a quick irritated pulse, an unusual

sual degree of restlessness & anxiety, with a sort of indescribable wretchedness. The child will not remain long in one position, nor can its complaints be in any way appeased. It whines, & cries, & frets, & seems to be exceedingly uneasy, without suffering any very positive pain.

Cases of this nature are probably dependent on spasm, & terminate fatally in a very short time, when relief is not afforded. But, on many occasions, the disease advances gradually, with the ordinarily catarrhal symptoms, such as heaviness, suffusion of countenance, defluctions from the eyes & nose, a harder & more shrill cough than usual, & with various degrees of fever, which, with the cough, is always exacerbated at night, & especially after the child has slept. Completely formed, there is no material difference between the two species of croup, & henceforward their progress is nearly, or perhaps exactly similar.

My mode of managing this disease is exceedingly simple, & has hitherto proved so successful, that I always approach it in the early stages, with a greater certainty of curing

+ It is worthy of your reflection, however that combining ipecac & calomel will greatly increase its emetic effect.

* + Diagnosis

Prognosis

Pathology

it than any of the other complaints of infancy or childhood.*

Called in the commencement of the attack, I endeavour at once to **puke** the child very freely, & for this purpose prefer the **tartarized antimony**,+ given at short intervals, as being one of the most certain & powerful of the emetics. At the same time I direct the child to be put into a **warm bath** for 10 or 15 minutes. This is a useful remedy. It rarely fails to promote the operation of the emetick, & will, indeed, alone, sometimes cure the disease. The emetick, however, not operating, or if after its operation the desired effect be not realized, I then **bleed copiously**, & repeat it & the bath. An attack must be extremely obstinate if it do not now yield. Nevertheless, it will occasionaly continue with little or no abatement, & under these circumstances, I resort to **topical depletion** by **leeches** or **cups**. The cups should be applied to the sides or back of the neck, as, when placed anteriorly, they will by pressure & suction, generally impede respiration, & sometimes endanger suffocation. Twice I have seen the distress from this mistake

+ Where the case is purely spasmodick & piece of flannel moistened with spirit turpentine & applied to the throat will sometimes cure the disease in 15 or 30 minutes.

so violent, that I believe death would have taken place had not the cups been removed. As means of local bleeding, leeches are very much to be prefered in such cases. Next I put a sinapism or blister over the throat, & in some instances, these may be made to precede the former applications.*

The foregoing remedies failing, or where the symtoms become so alarmingly violent as to demand immediate relief, I **bleed** ad deliquium animi. When pushed to this extent, I may almost say, that V.S. is almost invariably successful. As yet, I have never known one instance in which it failed. The moment that syncope takes place, the hoarseness, cough, impeded respiration & fever, disappear.

This valuable suggestion I derived from Dr. Dick, of Alexandria, one of the most original, bold & successful practitioners of our country. It has been claimed I understand elsewhere, with what justice I pretend not to determine. That however the practice was adopted at least 30 years ago by this distinguished physician, is unquestionable.

To prefer small & repeated bleedings at this

period of the disease, as is advised by one of the most authoritative of our own writers, is a pernicious abuse of an important remedy. It may be laid down as a rule, to which there are few exceptions, that in acute diseases, where V.S. is at all demanded, it should in the commencement be so copious, as to produce decisive effects. The rationale of the measure seems not to be well understood. Detractions of blood in small or large quantity operate, as remedial processes, very differently. The former abates action only, while the latter alters it, or so far reduces it as to enable the natural energies of the system to subvert or overcome it, & to re-establish health. Of this principle, we have illustrations in pleurisy, in fevers, & in many other affections, where a single profuse bleeding, timely recurred to, arrests the progress of the disease.

Conceding that the loss of blood is necessary to a cure, it will be proper under the circumstances stated, to pursue this course, even where we have grounds to apprehend debility. As small bleedings require to be often repeated, the aggregate of blood lost becomes ultimately greater, & more exhausting in its effects. Besides which, as there is less structural or functional derangement, the convalescence is more rapid & complete. Whether, therefore, with a view to

+ alone or in the state of combination which I mentioned a few minutes ago.

a prompt cure, or to economize the resources of the constitution, or as a security against relapses, or imperfect recoveries, this practice claims a decided preference.

The disease being broken, which is shown by the removal of the preceding symptoms, & even still more by the restoration of the natural susceptibility of the system to the action of medicine, I administer ~~medicine~~ **calomel**, not in small & repeated doses, as is more generally advised, but in the largest possible dose, in order that it may speedily & most actively purge. In this particular state of the disease, a thorough opening of the bowels carries off the lingering symptoms, obviates a relapse & confirms convalescence. But should cough or hoarseness, with tightness of the chest, & deficient expectoration remain, I employ the **polygala senega** as an expectorant. It is in extinguishing the remains of croup, that it displays, I think, not the least of its valuable properties. Doubtless, however, it may be used at an earlier period of the disease with advantage as an emetick, though still I prefer the tartarized antimony.*

The practice as here detailed, is applicable chiefly to croup in its forming & early stages. At this period the disease is restricted pretty much to the upper por-

× affection

tion of the trachea, & consists either in a spasmodic[x] of the glottis, or inflammation of the membranous lining of the larynx. But, permitted to continue for 10 or 15 hours, & sometimes even in a shorter interval, it extends itself to the bronchiæ, & into the substance of the lungs, producing sooner or later vast collections of mucous & phlegm, or exudations of coagulable lymph, or an engorged state of the pulmonary organs with blood.

The symtoms at this critical conjuncture are materially different. Now we have all the manifestations of an interrupted & defective circulation. The lungs loaded & oppressed, very imperfectly execute their functions. The complexion is mottled, & the cheeks have a circumscribed flush, with some mixture of lividness. The eyes are prominent & inflamed. The pupil is often widely dilated, attended by an expression of countenance wild haggard & ghastly. The respiration is exceedingly laborious, with a full & disturbed pulse, or, the child sinking under the disease, has its breathing rather more tranquil, with a weak & irregular circulation.

The symtoms in these different states of the lungs are so analogous, that it is not easy to establish, in all instances, satisfactorily, a diagnosis. But though

+ Frequently prevails epidemically as in winter of 1824-5 affecting adults as well as children.

Bronchitis distinguished from croup by extending cough to thorax.

difficult, it is a point of some consequence to be determined, as the treatment in every respect is not precisely the same. To arrive at a just conclusion, we must take into view all the circumstances appertaining to the case in its several stages, as well as the existing appearances.

Of the nature of bronchitis, & especially of that form of it, which resembles catarrhus suffocativus, or in other words, when it proceeds from collections of phlegm, or mucous, or lymph in the bronchiæ or pulmonary cells, I have mostly found that the case has had its origin in catarrh, & which has run a course more than ordinarily protracted. There is also at the time greater or less discharge from the lungs, or at least evidence of heavy accumulations of matter, with an inability to throw it up, & to which may be added, that the pulse is languid, & the surface cold & clammy. But occasioned by sanguineous congestion, however oppressive the dyspnœa may be, there is little or no cough, or pituitous discharge, &, what is very distinctive, an entire absence of the wheezing rattling, so general a symtom in the first case. The respiration, however, is singularly hurried, panting & laborious. The pulse too, is full, though irregular & disturbed, & very readily com-

+ Ex A tea spoon full of juice of garlic is a powerful emetic in torpid state of the stomach & cynanche tracheali.

possible. Cases of this sort, moreover, are apt chiefly to occur in florid & plethoric children, or, as I have seen, in directly the reverse, the weak & valetudinary, & generally this condition is disclosed at an earlier period in the disease.

The indication now, in each shape of croup, is to relieve the lungs of oppression, & to re-establish a free & equable circulation. To effect these purposes, the child should be placed in a **warm bath**, & while there, **copiously vomited** by an **active & stimulating emetick**. The **sulphate of Zinc** has been recommended, & is useful, though the **tartarized antimony**, with **calomel & ipecacuanha**, or the **juice of garlick** or **onion**, is preferable. These latter are very certain & active emeticks, & will frequently succeed in exciting vomiting when the officinal articles have failed

But in the second case, that of sanguineous congestion, having pursued the same measures, we are also very cautiously to draw blood - taking away a little at once, suppress the flow, and watch the effect on the system. Being beneficial we may renew the bleeding from time to time, till our views in this respect in this ~~respect~~ are attained.

The necessity of such extreme circumspection in the use of the remedy in this case, is readily explained.

Engorgement of the great viscera, & especially the lungs, takes out of the general circulation such a large portion of blood, & confines it so closely in the part, that any considerable loss by V.S. is very sensibly felt, creating in some instances prompt & ~~irreparable~~ irreparable exhaustion.

Where the lancet is altogether forbidden, **cups** or **leeches** may be substituted, & will be most serviceable on the back.

In this species of the disease, the **vesicating** applications are highly important remedies. The **blister** should be put **over the breast**, or if the case be so urgent as not to admit of delay, some means of more prompt vesication may be resorted to, as cloths wrung out of hot water, or what perhaps is better, pledgets of lint dipped in a **decoction cantharides**, made with the **spirit of turpentine**.

The subsequent treatment consists principally of the pretty constant use of **expectorants**, and for this purpose, the **antimonial wine**, the **oxymel** or **vinegar of squills**, the **decoction of seneka snake root**, either alone or in combination with the **carbinate of ammonia**, will answer exceedingly well. The **hive syrup** of Profes-

sor Coxe is here a very useful preparation. It is prepared agreeably to the following formula, & the dose is about a tea spoonful for a child of one or two years old.

Syrupus Scillæ Compositus.

℞. Seneka snake root, bruised,
Squills, dried & bruised, āā ℔ss
Water . . . . . ℔ viij

Boil together over a slow fire until the water is half consumed - strain off the liquor & add

Strained honey . . ℔ iv

Boil them together to six pounds or to the consistence of a syrup - add to every pound of this syrup, sixteen grains of tartar emetick - that is, one grain to the ounce.

Much may also be expected in some instances from the liberal use of calomel. At all times an exceedingly active expectorant, by which I mean whatever enables the bronchial structure to disengage & expel an oppressive load of matter, it seems, under these circumstances, occasionally to operate with really a specific efficacy. There are some indeed of the respectable practitioners, both of this country and of Europe, who trust almost exclusively to it.

Calomel was originally employed in croup by

the late Dr. Kuhn of this city, who prescribed it so early as the year 1770. The Scotch physicians are devoted to the remedy, & consider it almost infallible, or such rather seems to be the opinion of some of the most distinguished of their writers. By one of them it is said, "that in every case where it is employed, previous to the occurrence of the lividness of the lips, & other mortal symtoms, it has completely succeeded, both in curing the disease & in preventing any shock to the child's constitution." His manner of exhibiting calomel would appear daring, even to rashness, were we not acquainted with the insensibility of the system in this disease to remedial impressions of every description. To a child of two years old, he has given upwards of 100 grains in twenty four hours.

With Dr. Hamilton, to whom I have alluded, the Professor of midwifery at Edinburgh, I am acquainted, & from his high standing & character I entertain not the slightest doubt, with some allowance for an undue enthusiasm of expression, of the veracity of these representations. Nevertheless I will not take upon myself to support or recommend his practice. The mode which I have suggested of managing this disease, at least as it appears in this country, I must

think decidedly more effectual, & certainly less hazardous, as well as repugnant to popular prejudices.

In the preceding history, I have delivered very concisely, some account of the pathology & treatment of croup. It results from what has been said, that I consider it at first, as a spasmodick or inflammatory affection of the larynx, & in its subsequent stages as one or the other of the forms of peripneumonia notha - either a congestion of the lungs with mucus or lymph, or with blood. The former I believe to be by far the most common occurrence, or usual shape, of the disease.

The practice appropriate to the several circumstances of croup, I have also endeavoured to point out with some degree of precision. It will be perceived, that in relation to the latter stages of the disease, while I maintain that the lungs are affected differently in some cases, the only distinction in the treatment suggested, is the limitation of bleeding, to the apoplectic condition of these organs. Though I hold the other state to be essentially bronchitis, & hence originally of an inflammatory character, still, by the early depletory measures generally pursued, such no longer exists. We have on the contrary at this time, as its product,

effusions or exudations obstructing respiration. Yet wherever there is reason to suppose a remnant of inflammation, topical bleeding, at all events, may be, & ought to be practiced.

What on the whole, I wish especially to call your attention to, is the view that has been presented of the nature of croup at an advanced period. It is interesting, not as mere theory, but as leading to the practical improvement on which I have dwelt. Though not generally entertained or adopted, it is most fully established, as well by the phenomena of the disease, already noticed, as by dissections. To this point, we have to a certain extent, the testimony of Cheyne, who has written with ability on the disease, & the still higher authority of Bailie, not to mention other names of less distinction, all which has been confirmed by dissections, conducted in our own country.

Not a little is said of the existence of a membrane in the larynx, & to which so much is ascribed in occasioning death, that an operation has been proposed & even practiced for its removal. That it does occasionally exist cannot be denied, though I suspect rarely, as I never met with it, in my repeated examinations for this purpose.

+ I believe death generally takes place in consequence of effusion into the lungs, which prevents them from collapsing.

The appearances I have observed on dissections relating to the larynx were slight marks of inflammation, with more or less of mucus, such as is formed by all the secreting surfaces. Why I have not seen the membranous production is perhaps susceptible of explanation. To throw out coagulable lymph, of which it is composed, requires the vessels to be highly excited, a state which, by the copious depletion adopted in the cases that came under my notice, was probably prevented.† Even, however, were we assured of its existence, I do not know that in ordinary cases, the operation would to more than protract life. The disease at this time has reached the lungs, & hence no relief in this way could be expected. Yet it does sometimes happen, though seldom, that it is restricted to the larynx, & that respiration may be so much obstructed by the membrane alluded to, or from an accumulation of mucus, as to threaten the immediate extinction of life. By the removal of the mechanical impediment, an operation might be useful, & has actually proved so in two cases recorded in the foreign journals, in which relief was instantly afforded, & ultimately recovery took place. I have now in my possession a drawing executed by my friend, the late Professor Dorsey

+ Some german writers recommend Stimulatories to promote suppuration with the view of thus exfoliating the membrane

representing the membrane in a position completely to intercept the passage of air to the lungs, & which, had it been displaced by an operation, as he strenuously proposed, the child would probably have been preserved.

In the estimate of this resource of our art, we ought, moreover, not to overlook the fact of the striking effect, in many cases, from the expulsion of the membrane by vomiting or coughing, & sometimes in a state of things too, the most critical & alarming. Yet it seems that the opinion, on the whole, is deemed a very desperate & precarious expedient, to be held in reserve only for the extremest emergencies, & where common measures have altogether failed.

Two causes have conspired to render croup, which is not necessarily a fatal disease, so much so, that it is placed by some writers even among the opprobria medicorum, & by most practitioners is considered a highly obstinate & dangerous affection. The first is an erroneous opinion regarding its pathology, & the second the careless & feeble mode in which it is commonly managed.

An impression almost universally prevails, that children, owing to an extreme delicacy & frailty of constitution, cannot bear any very vigorous impression

from remedies. As a natural consequence of such an opinion, the general practice in their complaints is extremely inert, exactly indeed of that kind, which has been facetiously described as observing a strict neutrality between the patient & the disease, neither declaring for the one nor the other.

This is particularly the case on the continent of Europe. All of you know, that within the last 6 or 8 years, a premium of 10,000 francs was offered by the French Government to him who should produce the best treatise on the nature & treatment of this disease. After all the prize was awarded to a man who recommended in the management of this case nothing but hepar sulphuris given in minute doses so as to excite vomiting & to keep up nausea; & the writer declares, that if the practice is persevered in for 2 or 3 days, a cure may be confidently expected. This is one among the many signs of the low state of medical science on the continent of Europe. That at the present day, a practitioner of the least knowledge should promulgate to the world as a remedy for croup, an article so inefficient as hepar sulphuris is scarcely to be believed; & yet this discovery has been rewarded by 10,000 francs, & the practice generally adopted by

those who consider the inhabitants of the new world as degenerate in every respect, & particularly in minds!

By no narrow or partial observation, I am thoroughly persuaded that this opinion, relative to the delicacy of children is incorrect. Children, I have remarked, display an uncommon tenacity of life, & strength of constitution. They often survive under circumstances which destroy adults. They have been found living at the breasts of their mothers who had perished by exposure to cold, as is recorded by travellers & other writers. They confessedly resist contagion better than grown people, & when attacked, more certainly recover, not only from diseases of this discription, but from all others, when properly treated. Nor is this all. They sustain better the operation of the most active remedies, vomiting, purging, sweating, blistering, & I add, without hesitation, bleeding.

During the growth of the body, the fluids, in relation to the solids, are larger in proportion, as is distinctly proved. This fullness of their vessels & greater excitability of system, render children peculiarly liable to inflammatory attacks. Nearly all their complaints partake of this character.

It follows, therefore, that they require oftener to be bled, & my own experience convinces me that V.S. may be resorted to in their cases, with more safety, & decidedly greater advantage. No one who is conversant with their diseases, & has practised V.S. much in them, can withhold his assent from the accuracy of this statement.

Endowed with superior vital energies, children have, moreover, very extraordinary recuperative powers. They notoriously recover more speedily from wounds, & injuries, & surgical operations, & recruit with greater rapidity after being reduced, either by disease or by remedies of any description.

It is on this account, that while there is any indication of life, however discouraging the appearances may be, we ought never to view the case of a child, in any acute disease, as altogether desperate. But still retaining some hope, to continue to minister to the restorative principle of the constitution, & were this course generally pursued, I am persuaded, that we should not unfrequently be rewarded by such cures, as reflect lustre on the art, & give to our skill a glorious triumph.

To do this, however, in the disease before us, the practice must be prompt & energetick, & our atten-

* It is often called chink or chin cough, & was first described by Willis in 1650.

dance unremitted till relief is afforded. It is a rule with me, never to leave a child, in croup, till the alarming symtoms are over. This great degree of vigilance & attention are necessary from the rapid career of the disease, & not less from the extreme & peculiar uncertainty of the operation of our remedies in it.

As a most formidable enemy, in all his presentations, it should be attacked early, vigorously, & on the very outworks. Delay never fails to invigorate its force, & when permitted to get possession of the citadel, or in other words, a firm hold of the system, we shall find it always difficult, & often utterly impracticable to dislodge it.

# Pertussis.

Nosologists define pertussis or hooping cough to be a convulsive cough, occurring at intervals, followed by noisy inspiration, & returning in paroxysms which are usually succeeded by vomiting.* It generally comes on abruptly like a common cold, the child having more or less fever, & is sometimes early attended with that sonorous, spasmodick inspi-

ration which is denominated whooping*. But, in other cases a considerable time 3 weeks elapses before this symptom makes its appearance, & sometimes it does not at all happen. After the complaint has become confirmed, the paroxysm consists of a number of short inspirations closely following each other, so as to produce the sense of suffocation to the beholder, & is connected, when vehement, with effects of an inflammatory nature. When the hooping commences, the catarrhal symptoms subside.

The favourable signs are easy vomiting, free expectoration, &c. It frequently terminates by running into other complaints as hydrothorax, asthma, or consumption.

When death takes place suddenly, it generally occurs from a determination of blood to the head in a paroxysm of coughing, producing apoplexy & congestion – the blood often starting out of the mouth & nose. When the disease occurs in very young infants, or in consumptive patients, it is generally fatal.

As to the origin of pertussis there is considerable can be little doubt. It manifestly depends on a specific contagion which, as a general rule, affects the child only once. To this, however, there are many exceptions.

I have several times known the disease to occur twice in the same individual.

But though hooping cough commonly arises from specific contagion, it occasionally appears to depend on the causes producing epidemicks. Not very unfrequently it is so rapid in its progress, & general in its prevalence, that it can hardly be ascribed to contagion alone.

But by consulting the various authors on this disease, you will find that there prevails much diversity of sentiment relative to its seat & nature. By some it is placed in the air cells of the lungs, & in the minute extremities or large ramifications of the bronchia. It has also been located in the larynx & pharynx. By others it is maintained, with much plausibility, to have its primary seat in the alimentary canal, from which a sympathetic affection is extended to some part of the pulmonary apparatus. No less diversity of sentiment is entertained with respect to the nature of the disease. By one set it is held to be purely a spasmodick affection, while another, of equal weight of authority, asserts that it exhibits all the phenomena of active inflammation. The fact, however, is, that, till very lately, we have been imperfectly

† Brain no the primary seat of the disease, neither the digestive apparatus.

instructed as regards the disorder. Dissections of those who died of it were seldom made, & hence, with respect to its precise seat & nature, we had little else than speculation & conjecture. The subject, however, has at length been taken up by an able & celebrated man, Dr. Watt of Glasgow in Scotland, who to an ample collection of what had been previously ascertained, has added many facts derived from his own personal observation. He conducted his inquiries with the greatest diligence & accuracy, & his conclusions were founded not only on an attention to the phenomena which presented themselves during life, but also on the dissections of 30 or 40 subjects who had fallen victims to the disease.

It is stated by him, that the organs of respiration are seriously affected in pertussis, & very much so in the severe cases. He proved the disease to be inflammatory in its nature, & that its chief seat was in the mucous membrane of the larynx, trachea, bronchiæ, & air cells. When mild, he determined, that it would run its course, & cease spontaneously, without any disturbance of the functions of other parts, or even of the mucous membrane in which it was situated. But when violent it often entirely

obstructs respiration. Sometimes, in the advanced stage, mucus is so copiously secreted as to stop up the cells, & by thus preventing the access of air, to occasion suffocation. Sometimes leaving the mucous membrane of the lungs, the inflammation penetrates to parts more deeply seated, proving as dangerous as pneumonia, producing suppuration in the parenchymatous structure of the lungs, & sometimes tubercles which induce pulmonary consumption.

Notwithstanding the more correct light thrown on the disease by dissections, I have little new to propose in the management. An abundance of remedies has long been at our command, & all that we require is such a knowledge of the pathology of the case, as to render the application of the remedies uniform & decisive. The practice of almost every one in this disease has been characterized by empiricism, from the want of principles to guide him, as in complaints which are better known.

Two leading indications obviously present themselves in the management of hooping cough.

These are 1st, to palliate present symptoms, & 2nd, to overcome the habit of perverted associations by which the disease is kept up & continued long after the causes which produced it have ceased to operate.

Taught by the evidence submitted to us by dissections, as well as the prominent symitoms of the case, we must at once assent to the propriety of meeting the first stage with the directly depleting remedies. But in their administration we must be regulated by sound discretion, & our practice should be adapted to the state & circumstances in each particular instance.

Consulted in the case of a child, robust, florid, & with a full pulse, I would not hesitate about the propriety of **venesection**. This is especially demanded by the interrupted circulation in the lungs, & properly employed, affords much relief. Exactly as in other diseases, V.S. should again & again be repeated, if called for by obvious indications.

Of the various remedies at different periods suggested for the management of pertussis, I know none of which I entertain a better opinion than of **Emetickes**. They are adapted to every stage of the complaint, & should be repeated daily, or even twice a day, for a week or two in succession. By a steady perseverance in this course, & at the same time, by using the auxiliaty means, we shall generally be able to conduct the patient to a happy issue. After having freely vomited, it then becomes very benifi-

+ Dr. Cope's Hist Syp

cial to make use of emetics in nauseating doses. These keep down the fever, & at the same time, operate very beneficially as expectorants in relieving the lungs from their oppressed condition. Every practitioner, I believe, acknowleges the superiority of ipecacuanha, white vitriol, & squill. Of these, I generally prefer the ipecacuanha. It is more lenient than the white vitriol, & appears to me sufficiently active for all the purposes for which it is prescribed. But it is right to state that Dr. Thuhn always resorted to white vitriol in these cases. It was his opinion that the medicine not only operates very beneficially as an emetick, but also by its antispasmodick power prevents a return of the paroxysm.

All the writers who have described hooping cough, take notice of the great tendency to constipation which occurs in the early stages. This among other circumstances led to the idea, that the complaint is originally seated in the alimentary canal. But, independent of all theory, we are called on to remove the condition of the bowels, which, if it does not produce, certainly aggravates the disease. For this purpose, the mild laxatives as castor oil, magnesia, &c. have been recom-

mended. But in my estimation, they do not answer half so well as the **mercurial** purges. Independently of its purgative effect, **calomel** seems to exercise over many diseases, & particularly hooping cough, a peculiar power. No fact, indeed, is better known, than that active discharges from the bowels, produced by calomel, break down the force & abridge the career of this disease. So much confidence is, indeed, reposed in the remedy, that it is the settled practice of the most respectable physicians of this city, to commence the treatment with calomel. It is customary to give doses of calomel at intervals of 2 or 3 or 4 days. Whatever theory may be adopted relative to its mode of action, no doubt can be entertained of its efficacy. To keep the bowels open, it is always preferable to every other article.

But while we are endeavouring to make an impression on the disease by general treatment, we should not neglect the use of local remedies. Congestion of the lungs is very apt to take place in hooping cough, as indicated by the symtoms already pointed out. Not less to remove the congestions, than to relieve the topical inflammation which is known to occur, **blisters** are of decided

advantage. Co-operating to the same end we should also resort to leeches & cups, especially if the lungs be much engorged which is indicated by painful & laborious respiration, turnid face, livid skin, weak & irregular pulse, &c.

As I have enumerated, such are the remedies calculated to meet the first indication in pertussis. They are bleeding, vomiting, the exciting of nausea, active purging with calomel, & the local applications, as blisters, cups, & leeches. A majority of cases, however, do not require such active practice. As the disease generally occurs, it is of a mild character, & remedies infinitely less powerful than those which I have enumerated, may be employed, & will be found adequate to effect a cure.

Next I am to detail the remedies proper for the 2nd stage of pertussis. In the fluctuation of practice & sentiment, the medicines employed in this period of the disease, have been exceedingly numerous & diversified. As the practice has hitherto been very empirical, it will be impossible for me to treat of it with any sort of order or method. All that I can do is to give a very cursory account of such of the remedies as are suited to the declining stage of the disease, when there

+ Alkalis have been recommended.

is reason to believe that the febrile action has been removed. +

Most of the narcotiks & antispasmodiks have been liberally employed at different times, & among the rest Opium has not been neglected. By all practitioners, whatever may be their theoretical views, this article is used as a palliative of the more vehement symtoms. The practice was introduced by Dr. Withering, who believed the medicine to be possessed of great powers in the cure of pertussis. My own experience, however, leads me to a different conclusion. Opium will calm the irritation of the lungs, & thus suspend the paroxysm; but this is all that can be expected from it in the complaint under consideration.

It is now nearly half a century since cicuta was brought into publick notice, as an infallible cure for hooping cough. Coming from such authority as Dr. Butter, who had previously written a work on the remittent fever of children, it soon obtained great popularity. Consulting the works of the time you will find them replete with attestations of its great virtues. After awhile, however, a more extensive experience with the medicine, led practitioners to place little confidence in it. Like opium, it sometimes

palliates the cough; but it makes no beneficial or permanent impression on the disease. I would place it on the same footing with the henbane, nightshade, digitalis, & all the other narcotics. Considering, however, its utility in asthma, an exception, perhaps, may be made in favour of **Stramonium**. That it is beneficial in asthma, there is no longer any doubt, & from the analogy which exists between certain cases of this disease & of pertussis, it is not at all unlikely that it may also be beneficial in the latter. But I speak altogether from conjecture, as I have not had the slightest experience with the remedy. - It is generally used in adult cases by smoking it like tobacco.

Entertaining the impression that hooping cough was purely spasmodick in its nature, practitioners were at one period much in the habit of confiding altogether in antispasmodick remedies. The whole of this class of medicines was tried in succession, & more especially <u>castor</u> & <u>musk</u>. Of the former article I know nothing from my own experience, though it has been strenuously recommended by a variety of authors. Cullen, however, tells us that it is wholly destitute of efficacy; & though I do not go so far as

he, yet I do believe that it has no valuable powers in this case. The same author makes a similar remark as regards musk, in which I do not at all coincide with him. Determining, on the contrary, from my own personal experience with the article, I should say that musk, in the advanced stage of hooping cough, is one of the most efficacious remedies I have ever tried. The mode of administering it is commonly in a julap. For this you will find a formula in the Dispensatories, & one that will answer very well. But the medicine is so exceedingly nauseous & offensive, on account of its odour, that it is difficult to administer it to children, & hence it is not much employed. To obviate this objection, it may be given by injection; though in this way it is not so efficacious as when given by the mouth. But whatever may be the properties of the natural musk, they are equalled, if not surpassed by the artificial. This you know is formed by uniting nitrick acid with oil of amber. Ever since the age of VanSweiten & Boerhaave, the powers of this preparation have been well known. But it is only a few years that the artificial musk has been employed in the treatment of hooping cough. To Coopland a Professor at Gottingen, we

owe the application of this remedy in the disease. As soon as the intelligence became known to the medical world, the article was generally employed. But it would appear that the subsequent & more enlarged experience, has detracted, considerably, from its reputation. It is right, however to state, that the celebrated Dr. Bailie, one of the most candid & experienced practitioners in London, after a full trial of the article, declares that the artificial musk, if properly timed, in hooping cough, is a remedy deserving of the largest share of confidence. As yet I have not employed it to a great extent, & the few trials I have made, have not answered my expectations. That it is powerfully antispasmodick, there can be no doubt. I have employed it in a great variety of nervous affections, &, except in pertussis, have had every reason to be satisfied with its effects. It should be given in an emulsion, made by rubbing it with almonds and water. The dose is the same as the natural musk, viz. from 10 to 12 grains for adults, & to be graduated for children according to their age. Artificial musk is also used in tincture.

℞. Artificial musk ʒ ij
Alcohol . . ℥ viij

The dose for a child is 5 or 6 drops, & for adults a proportional quantity.

Of the oil of amber, one of the ingredients of the preparation just mentioned, much has been said as a remedy in pertussis. It is particularly extolled by Underwood, the author of a work on the diseases of children. But its efficacy, determining from my own experience, is not very great, It has been tried by me again & again, & never with any signal advantage. But I ought to mention that many practitioners of this city, entitled to our full confidence, report differently of the oil of amber. The dose for a child of one year old, is 4 or 5 drops, taken on a lump of sugar, dissolved in water, & repeated several times a day.

Of all the articles in common use, incomparably the most effectual in hooping cough is **assafœtida**. To this point we have the testimony of almost every practitioner, & so much confidence has it gained in this city, that it has almost superseded other remedies. The physicians of Philadelphia, after having evacuated the alimentary canal by purges & emetics, & abated the violence of the symtoms by V.S., for the remaining treatment resort to assafœtida.

Make a saturated solution of the gum, & to a child

between 2 & 3 years old, give a dessert spoonful every 2 or 3 hours. The remedy is, however, objectionable from its nauseous nature, & is often very difficult of administration.

As you may readily suppose tonicks have also been employed in this disease, in the advanced stages. By many writers, the Peruvian bark has been very favourably noticed. But no one has gone so far in commendation of the article, as Cullen, who, indeed, places it above all others in the advanced stages of this complaint. It is reasonable to presume, from the known properties of bark, that it might be productive of advantage in a disease characterized by the paroxysmal type. But notwithstanding the plausibility of this reasoning, & also the testimony which might be adduced of its having done good, I am not prepared to say much in its favour. I do not know that in any case where it has been used by me, I have derived from it any advantage. In substance it is exceedingly disagreeable to children, difficult of exhibition, & if taken into the stomach is almost always rejected. The watery preparations are all too weak, to make any salutary impression.

Exactly on the same principles arsenick has

lately been introduced into the management of hooping cough, & is particularly recommended by Dr. Simons & Dr. Ferriar of Manchester in England, by whom it was brought into notice. They gave it in such doses as we might suspect from the article. To a child 18 months or 2 years old, they gave from 1 to 1½ or 2 drops of Fowler's solution in sweetened water, & gradually increased the quantity. Could we place implicit confidence in the reports of these writers, we should be satisfied with arsenick alone, & run to no other medicine in this disease. But it is my duty to tell you, that on authority so respectable as that above mentioned, I have repeatedly employed the article, & without any sensible advantage.

In the rage for new remedies in pertussis, the saccharum saturni has not been overlooked. The credit of first applying it in this disease, is claimed by Dr. Rees of London, & his claim is generally conceded. But in turning over the pages of Sauvages, I find that he advised its employment. After detailing all the other remedies, he adds,

Also give saccharum saturni to children, in doses of 2 or 3 grains, & graduate to children. After Dr. Rees' publication, the medicine was tried in Europe, but little is said of its success. It was much used by the late Dr. Rush, who reported favorably of it. It was not a little commended by the late Dr. Barton in his lectures on materia medica. It is not pleasant to dissent from such authority, but truth compels me to state, that whenever I have tried it myself, or seen it employed in the practice of others, not the slightest advantage has been experienced.

The last of this class of remedies, employed in hooping cough, is the nitrate of silver. It has lately been particularly recommended by Mr. Jones, a surgeon of some eminence in London. But the remedy seems to want confidence, & is too violent to be employed in cases of children, especially before its efficacy is fully established by more ample experience.

I am next to bring before you, a different discription of medicines. It is, perhaps, known to you, that the alkalies have been employed in this disease. The praise of having originally prescribed them is commonly accorded to Dr. R. Purison of London. Being well pleased with the effects which

I saw result from a prescription of his, I copied it when I was abroad, & brought it over with me to Philadelphia. It is as follows.

℞. Carb. Soda gr iij
Vin. Ipecac. gut. v
Tinct. Opii. gut. j
Aqua . . . ℥ j

The whole to be given at a dose, to a child one year old, & repeated every 3 hours.

At the moment that this preparation was generally employed in regular practice, a combination of the vegitable alkali & cochineal was put forth, I do not know by whom, & has now acquired such confidence, that it has superceded almost every other remedy. It is prepared in the following manner.

℞. Carb. Potass ℥ j
Cochineal . gr x
Aqua . . ℥ iv

This mixture is to be sweetened with loaf sugar. The dose is a tea spoonful every 2 or 3 hours.

My experience with the alkalies in hooping cough is sufficiently great to enable me to pronounce with some degree of confidence on their merits. My conviction is, that they are entitled to credit, as remedies calculated to make a strong impression on the dis-

ease, & that they are, apparently not without benefit as palliatives of the more distressing affections. To this point we have not only the concurrent testimony of the physicians of England & of this country, but also the popular voice, to a considerable degree. But to obtain the full effect of the alkalies, we must administer them in much larger doses than those I have mentioned. Exhibited in the very small portions contained in the formula above detailed, they will prove of little advantage. It was owing to my employment of these prescriptions, that, for a time, I lost all confidence in the remedy. But since I have doubled the quantity, I have reason to be satisfied with its efficacy. Of the comparative powers of the alkalies in pertussis, I do not know that I am prepared to decide. I have lately been in the habit of using potass, & have derived great utility from it. The practitioners of this city prefer the same article. But I have no good reason for believing, that it is in any way preferable to the carbonate of soda. In what way these articles operate is not very intelligible to us. By some European writers, it is contended, that they do good by correcting the acid sordes of the alimentary canal. That such accumulations do exist, & by

* In my lectures of last year, I said, that the praise of having introduced this remedy, is given to Prison; but I find, by looking over a periodical work of Germany, that the alkalies have been used from time immemorial, in that country.

irritating the stomach induce irritation of the lungs in pertussis, is a fact as well attested as any in the whole compass of pathology. It is not, therefore, altogether improbable, that such is the modus operandi of the alkalies. Nevertheless, there is no absolute necessity for resorting to this chemical solution of the problem. The alkalies, contrary to the common opinion, do really exert a powerful agency on the system. We see this fact exemplified in a number of diseases, & particularly those of a periodical nature. On a former occasion I mentioned to you, how exceedingly efficacious are a few grains of carbonate of soda in intermittent fever, combined with Serpentaria & Peruvian bark. As the alkalies act in intermittents, so do they act in pertussis. In both cases they operate by making a strong & peculiar impression on the stomach, interrupting & terminating those morbid associations which constitute the foundation of all periodical diseases.*

Leaving the consideration of the alkalies, I am now to make a few remarks on a medicine which had, & still continues to have, not a little reputation. My allusion is to the tincture of cantharides. This has been long known in different parts of England as a popular remedy in hooping cough.

* Garlick in Spts. of turpentine, tinct. of cantharides, volatile alkali, Tartar emetick dissolved, &c. if rubbed along the spine, sometimes answer a good purpose.

But I believe that its reputation was established by the late Dr. Lettsom of London, who, 25 or 30 years ago, first called the attention of physicians to it. He gave it in minute doses, 4 or 5 drops at a time, mixed with a little sugar & water. As soon as strangury, however slight, is induced, we shall generally find the cough & other symtoms to be suspended, & if the medicine be persisted in for 4 or 5 days, we shall commonly succeed in removing the disease. But it is by no means a pleasant mode of relief. It is extremely disagreeable to the child, & in employing it you will have to contend against all the prejudices of the family. But when the disease is obstinate, you will be justified in resorting to a remedy so powerful even as cantharides. It is a favourite with Dr. Physick, who has again & again used it with advantage in pertussis, conjoined with laudanum.*

I have now given you the catalogue of remedies which have been, & still continue to be considered as most applicable to pertussis. Many of them are deserving of little praise. But in morals it is often as important to point out the evil as to indicate the good. The same holds good in the practice of medicine.

By attentively considering what I have said

you may, perhaps, collect my own practice. But lest you should not, I will recapitulate it in a few words.

Believing the complaint in the first stage to be inflammatory, I resort to the remedies best calculated to meet this indication. These are V.S., purging, with mercurial cathartics; & when there are large accumulations of mucus in the bronchia, emetics often repeated, & in the interval, nauseating doses of the same remedies. When the child is exceedingly oppressed, & there is reason to suspect congestion, or inflammation of the lungs, then I resort to topical depletion by leeches or cups & to the application of a blister over the chest. As a mere palliative of the more distressing symtoms, I occasionally use opium. After the crisis of the disorder, or, in other words, after the inflammatory stage is passed, I have found no article so efficacious as the alkalies & the watery solution of assafœtida. Both are eminently beneficial in this condition of the disease, & one or the other may be selected, as the circumstances of the disease demands. In many cases it may be serviceable to alternate them. At first employ the assafœtida till the patient becomes disgusted with it, or till it looses its effect on the system, & then resort

to the alkalies. With this we conclude what may be called the medical treatment of hooping cough; but, before dismissing the subject, I must call your attention to the necessity of a proper regulation of diet.

As the disease is inflammatory in the commencement, it is of the utmost importance that the antiphlogistick plan should be observed in all its details. As a part of this plan, the entire exclusion of animal food, should be insisted on. It will be impossible to make a favourable impression on the disease, unless the patient be confined to vegetable diet, & the antiphlogistick course rigidly adhered to. Not less important is a strict attention to clothing. This should be warmer than is generally worn in health.

It is a very popular opinion, that the patient derives great advantage from exposure to fresh air. There is not the slightest doubt, that if the weather is warm & mild, this method is of great service. But if the disease occur in cold weather, you should keep the child as much as possible within doors, & in an apartment, the temperature of which is regular & equal. By exposure to cold, especially in the first stage, you will never fail to aggravate the

* The employment of vaccination has of late years been proposed to destroy the progress of this disease; but experiments in England about 20 years completely disproved it. Dr. Watt of Dublin has made experiments which go to maintain that vaccination awakens a susceptibility to scarlatina & pertussis; but all this requires confirmation.

symtoms, & sometimes induce catarrh, & in other cases, pneumonick inflammation. When this supervenes hooping cough, the case is generally fatal.

I wish to press your attention more particularly to this fact, as the practice is almost universal, to take the child out of doors, with the view of exposing it to the fresh air. But there is no point on which judicious physicians are more agreed, than as regards the preservation of the child in an equable temperature. Let me repeat, however, that if the weather is warm, great advantage will be derived by removing the child into the country. When from poverty, or any other cause, a residence in the country cannot be commanded, you should substitute occasional riding. By this simple process, you will sometimes do more good, than by all the articles in the materia medica. Even a change of residence from the country to the city will often be advantageous.*

I have dwelt thus minutely on this disease, as none is more perplexing to the practitioner, nor attended with greater fatality. Cholera infantum and pertussis are more destructive of life, & make wider inroads in domestick happiness, than all the other infantile diseases put together.

+ Dr C. lectured on Angina Pectoris, this year (1825) before he lectured on Asthma.

# Asthma.

As allied in some respects to the foregoing disease, I proceed next to deliver an account of asthma. This disease has most commonly been considered as a spasmodick affection of the lungs, which comes on by paroxysms, sometimes very regularly at stated intervals; though perhaps more generally it does not observe very strictly, the law of periodical occurrence. There are, indeed, wide deviations as regards the return of the paroxysm. Cases are recorded in which the attack came on daily, weekly, monthly, yearly, or even at more distant periods, as, for example, twice in a long life.

The causes are such as act directly on the lungs, or such as act indirectly through the medium of the general system. Of the first of these causes are certain acrid matters inhaled, as the vapours from lead, arsenick, mercury, or other metals; also, pungent odours, as strong perfumes, or pungent smells, produced by a great number of substances. It is a curious fact, that the odour arising from ipecacuanha, which, as I shall hereafter tell you particularly, is highly beneficial as a remedy in this complaint, sometimes brings on a paroxysm of asthma. I know a

student of the late Dr. Barton, who could not wrign out the article, without inducing an attack. In looking over an early volume of the transactions of the Royal Society of London, I met with a case precisely similar. To these causes we may add the irrespirable gases, as carbonick acid gas more particularly, & different states of the atmosphere, as regards its sensible or insensible qualities, as excess of heat or cold, moisture or aridity, with some occult peculiarities with which we are not acquainted. Thus the air of the country & suburbs, is much more pernicious than that of the city; & cities, apparently under similar circumstances, differ materially in this respect, as is illustrated strikingly by Baltimore & Philadelphia. It is said that the air of Baltimore peculiarly predisposes to asthmatick affections: and I have known several individuals come from that city to Philadelphia, to be considerably benefitted by the change of air. The air of a high ~~station~~ situation will sometimes induce, while that of a low one will not. These causes act primarily on the lungs; but, as I before stated, there are some which secondarily affect this organ. Most of these may be traced to wrong impressions on the alimentary canal, made by worms, indigestible food, inanition from long

fasting, or repletion from excessive eating or drinking, & constipation of the bowels. Among these causes may also be stated, a suppression of any natural discharge, retrocession of eruptions, metastasis of disease, & the indulgence of violent passions. Most generally, however, the circumstances enumerated, are merely exciting causes, acting on a disposition derived by inheritance, or arising from a peculiar conformation of the chest, & thus awakening the disease into existence.

But whatever induces a paroxysm of asthma, it very commonly commences in the evening, or after the first nap, with a sense of tightness or stricture across the chest, & with impeded respiration. There is either no cough at all, or if this occur, it is unattended with expectoration. The patient, if in a horizontal posture, is under the necessity of rising into an erect one, & approaches, for relief, to the open window. The difficulty of breathing is found to increase, & inspiration & expiration are performed with a wheezing noise. The voice is weak; the exertion of talking, more or less painful. After these symptoms have continued for a few hours, a profuse perspiration breaks out, respiration becomes less laborious, the cough, which in the commencement

+ Prognosis is rather difficult, but we may generally calculate on curing it, when it occurs in young persons of sound constitutions, & is brought on by accidental causes. On the contrary when it occurs in advanced age, & when it is hereditary, we shall seldom succeed in effecting a cure.

Diagnosis. Asthma can scarcely be confounded with any other disease; the suddenness of its attack coming on during the night while the patient is in the recumbent posture; the periodical nature of its attacks, the peculiarity of its cough, all combine to distinguish it from Angina Pectoris & Pertussis with which it is most likely to be confounded. Finally it may be distinguished from dyspnoia, by the latter being permanent & not periodical.

was without expectoration, becomes more free, a discharge of mucus takes place, & all the other unpleasant affections are alleviated. There is less tension across the breast, & less difficulty of respiration.

Every night, towards midnight, the same symptoms recur, & are removed again towards morning. After the disease has thus continued for several days, the expectoration becomes more copious, and the paroxysms cease altogether. The pulse, for the most part, throughout the case, is quick & small, though it is sometimes not at all affected. The urine at the commencement of the paroxysm is pellucid, & in the remission is high coloured, & often deposits a lateritious sediment. The face, during the paroxysm, is often flushed & turgid, but is as often pale & shrunk.

Asthma is a periodical disease, & does not often occur before the age of puberty. It attacks the male, more frequently than the female sex, & is more liable to occur in hot weather, but this is not uniformly the case. The paroxysm is often succeeded by lassitude, torpor, drowsiness, lightness & pain in the head, & many symptoms of dyspepsia.

As regards the pathology of this disease, very

little, I apprehend, is clearly understood. By Cullen & most of the modern writers, it is supposed, it is supposed to consist in a spasmodick constriction of the muscular fibres of the bronchia, which interrupts respiration, & gives rise to the other distressing symtoms incident to the case. But a very late writer, who has treated of this subject, not without ability, has attempted to overthrow this doctrine, though I think unsuccessfully. It is contended by him, that the leading & most common form of the complaint, is caused by irritation applied to the air cells, either by aerial acrimony, or by serum. As yet dissections have not thrown much light on the disease. In cases of sudden death, or when the complaint has not long existed, the lungs on examination, appear in a perfectly healthy condition. But in very old & prostrate cases, we are told by Morgagni, that the parts show evident marks of morbid action, & this circumstance is corroborated by the well known fact, that asthma sometimes induces pneumonick inflammation, or runs into hydrothorax, or consumption.

On the whole it appears highly probable to me, that asthma is really a disease of the lungs, attacking in the shape of spasm, & that the inflamma-

tion & effusion, & other morbid phenomena, occur only as consequences, or mere effects of the preceding disease. But at the same time it must be admitted, that the spasm to which I allude is often only secondary in its nature, arises from various causes of irritation, but most generally originating from the stomach & bowels.

The ordinary division of asthma is into spasmodick & humoural, the one dry & the other attended with pituitory expectoration. The first is the most common form of the disease in the early, & the second in the advanced period of life. Whether the peculiarity is sufficiently uniform to warrant the division into two cases, I am not prepared to say. But in practice this point need not be regarded. Each form has repeatedly come under my notice, & I have found that they are both to be managed on the same general principles, only adapting the remedies to the circumstances of the system connected with the disease. It appears to me that a much more correct division would be into idiopathic & symtomatick; because, most unquestionably, the disease does exist in both these shapes. But whatever may be the pathological view, entertained with regard to the

disease, the treatment divides itself into that which is proper during the paroxysm, & that which is suited to eradicate the disease, & to prevent its occurrence.

No practitioner, merely looking at the prominent symtoms of this disease, would hesitate for a moment as to the propriety of V.S. It seems to be called for by the interrupted circulation through the lungs, indicated by the difficulty of respiration, the suffused & tinged countenance, & a variety of other circumstances. But still it is universally confessed that the remedy is exceedingly ambiguous, & by many it is altogether condemned. Even those who are in the habit of recurring to it, allow that the advantages derived are not at all commensurate with what might be expected from the symtoms. It is, however my settled conviction, that though the lancet is not in general required to a great extent; yet, in the more violent fits of the disease, it is useful & sometimes indispensable. Nevertheless, I wish you to recollect, that I recommend the remedy only in plethoric cases of the disease, where there is great fever & when the attack is vehement, & of short duration. Under such circumstances, V.S., undoubtedly prevents that organick injury

of the lungs which lays the foundation for hydrothorax & pulmonary consumption. In determining on the propriety of the practice in this case, we are not to confide in the ~~in the~~ indications of the pulse, as this in many cases, is very slightly affected. But we must take into view all the circumstances of the case, particularly those already mentioned, as apparently calling for the ~~medicine~~ remedy. Cases do, however, often occur, where V.S. is entirely inadmissible, & would not prove of any utility, though there may be present no inconsiderable degree of oppression of congestion of the lungs. It is exactly in this state of the case, that topical depletion by cups to the back is indicated, & may be most beneficially employed.

Of the efficacy of **emetics** in a paroxysm of asthma, infinitely less difference ~~prevails~~ of opinion prevails, than as relates to the two former modes of evacuation. But these are objected to by some as hazardous & altogether useless. This objection has always seemed to me as altogether frivolous; & so far has it been from influencing me, that I almost always prescribe emetics, & have frequently met with success. As respects the nature of the case, whether it is spasmodick or humoural,

there is no diffrence in the administration of the remedy. Most generally under every circumstance of the disease, vomiting causes a relief of the paroxysm, & if timely resorted to, sometimes prevents a return. Ipecacuanha is commonly prefered over all other articles. As far as I know, the practice of using it, originated with Athenside. At least an excellent paper was written by him on the subject, & may be found in the transactions of the London College of Physicians. During the paroxysm of the disease, he administered gr XX of ipecac in order to afford immediate relief by vomiting; & in the intermission, from gr iij to V every morning, to excite nausea & effectually remove the complaint. When ipecac is given in these small doses, whether it produces vomiting or not it is equally beneficial. It is right, perhaps, for me to mention, that Cullen and most other authors who have followed him, differ with me as to the equal propriety of emetics in the two species of asthma. It is said by Cullen, that though vomiting is very benefical in the pituitary or humoral, it is of no avail in the spasmodick, & is sometimes evidently mischievous. To this I will only answer, that from my own experience I have been led to an opposite conclusion, & have found vomiting

just as serviceable in one, as in the other form of the complaint. Do we not give emetics to relieve spasm in cynanche trachealis, & is not the effect of the remedy most beneficial? Why should we not in asthma arising from spasm, recur to the same remedy? But on this you may implicitly rely, that as far as my experience has extended, emetics may be not only safely, but usefully employed in the spasmodick as well the humeral species.

By some practitioners the squill is greatly preferred in this case. It is not at all unlikely, that this article is well suited to the disease, & especially when it occurs in old people whose lungs are torpid & loaded with phlegm, & that they may be relieved, require an emetick active & stimulating. Much also has been said of a combination of ipecac & squill, which has been reported to be vastly superior to either of these medicines alone. But of this I cannot speak from any experience of my own. Emetics in nauseating doses are by some preferred to active vomiting, while others, on the contrary adopt the latter mode, & which of the two is the better practice has not been accurately determined. On this point I have long made up my mind. To me

Sprays of garlic

it is manifest that, as in all other cases, one or the other should be adopted according to the circumstances of the disease. To break down an attack, vomiting is infinitely more powerful, & should never be neglected. But with a view to the promotion of expectoration, nauseating doses are among the best means in the management of asthma. Commonly ipecacuanha is admitted for this purpose, & is exceedingly efficacious. But in cases of old people, in whom there is much atony of the lungs, the more stimulating expectorants are demanded, as squill, gum ammoniac, Seneka snake root, & volatile alkali. Not the least efficacious of the stimulating expectorants is a combination of lac ammoniacum with nitrick acid. Prepare of the milk of ammoniac ℥viij according to the formula given in the Dispensatory, & pour this gradually on ℥ij of nitrick acid, stirring the mixture in a glass mortar at the same time.

It is also beneficial in some cases to add from ℥ss to ℥j of paregoric. The dose is a table spoonful every hour, or two, according to circumstances. From this preparation great utility has been derived.

As might be expected from the known effect

of purges in the pulmonary complaints, they are entitled to little confidence in asthma, and are even, sometimes, productive of injury, if urged to any extent. It is, however, important that the bowels in the commencement, should be freely evacuated, & afterward kept in a soluble condition, as the disease is, in some cases, considerably aggravated, & is even produced, by constipation. For this purpose calomel is peculiarly adapted.

Nothing would appear more reasonable to a person considering the symtoms of asthma, than that Opium would be serviceable in that complaint. Accordingly it has been liberally employed, & with very opposite results. It has lately been said by Dr. Bree, that Opium is uniformly hurtful, & such is by no means a rare opinion, though it is not universally entertained by practitioners. The truth is that the effects of the remedy, are not the same in the different stages; being always mischievous in the beginning of the disease, or when it is at its height. But after the complaint has been in part reduced by the active means already detailed, opium is productive of very great advantage, as I am persuaded from my own observation. Never, however, should we confine the

+ Ether is very good, & may be combined as follows:

| | |
|---|---|
| Ether . . . | ℥ss |
| Loaf sugar | ℥j |
| Water . . . | ℥ij |

treatment of asthma to opium alone†. Every article belonging to this class of remedies, the narcotick or antispasmodick, has been successively employed, simple, & variously combined. What was said on the effect of opium is equally applicable to the whole of these medicines, with this difference, that they are all inferior to that article in efficacy. It is right, however, that I should make an exception in favour of one of them. My allusion is to the **Stramonium**, which of late years has gained great reputation as a palliative of the asthma. The root of the plant is the part employed. Having been previously washed, dried & bruised, it is to be smoked in a pipe, exactly like common tobacco. That the stramonium thus employed, occasionally affords relief, cannot be doubted. I have myself witnessed many cases in my own practice, & its efficacy is abundantly attested by practitioners both in Europe & in this country. But, like other remedies, it often fails; &, perhaps, we shall never be able exactly to ascertain under what circumstances it may be given with any certainty of success. It would seem, however, determining from my own experience, to be best suited to dry or spasmodick asthma. But after all,

+ Thus Segar & Stramonian are on o

whether stramonium is superior to tobacco used in the same way is very questionable. More than once I have known relief afforded by a segar, though at other times it has aggravated the disease. But I have never seen any of the violent effects of stramonium, which are alleged by some European writers who depreciate the article.

In the management of the disease under consideration, no remedy would appear to promise more than blisters to the chest. But actual experience does not realize this anticipation in any great degree, & there are not wanting some who discredit entirely the utility of their application. My own observations of the effects of the remedy do not allow me to concur in such unqualified censure, though they have so often disappointed me, that I am not inclined to repose in them any great share of my confidence. It is asserted that incomparably more benefit is derived from blisters to the extremeties; &, in some cases, when thus applied, to use the language of Dr. Rush, they operate like a charm.

As blisters to the seat of the complaint are at least allowed to be of such doubtful utility, it will be right to substitute some other vesicating

+ without cream or sugar

× in which remedies diametrically &c.

application, & particularly the **plaster** now prepared of **tartar emetick**. To the employment of this remedy, we are encouraged by its astonishing effects in some of the pulmonary affections, particularly angina pectoris, a complaint so analagous to some forms of asthma. During the paroxysms relief is sometimes procured by draughts of intensely cold water; in other cases by hot water, & in others by beer, or very strong coffee. Exposure to air is also beneficial, & sitting near a fire, with the feet exposed to it, is still more so.

Do not be surprised at my mentioning such opposite remedies. This is not the only disease, diametrically opposite are found beneficial, & in which we must entirely submit to experience as our guide. It may be hurtful to the pride of our science, though it is indisputably true, that we are often, in the treatment of diseases, compelled to throw all our principles behind our backs, & to submit the dictates of experience, in the true spirit of genuine empiricism.

The **inhalation** of **vapour** is well calculated to relieve the lungs, & sometimes may be resorted to with obvious advantage. Even the steam of water is not without utility, though it is rendered

infinitely more efficacious by impregnation with some of those articles mentioned under the head of peripneumonia.

At one period of the reign of pneumatick medicine, it was fashionable to use gases or factitious airs in the paroxysms of this disease. By Dr. Beddoes, ~~[illegible]~~ Dr. Thornton, & other authors, they were extravagantly extoled. By Dr. Beddoes we are told, that "the effect of oxygen is altogether miraculous. The moment it is inspired, the livid colour of the countenance disappears, the laborious respiration ceases, & the functions of all the thoracic organs go on easily & pleasantly again". But subsequent & more enlarged experience, has shown that no benefit is derived from oxygen or any of the irrespirable gasses, alone, or diluted with atmospheric air; & that ~~[illegible]~~ practice, like many other fooleries, after having enjoyed an ephemeral existence, is dead & gone to the tomb of all the capulets.

I have now brought to a conclusion the history of the remedies proper to be employed in a paroxysm of asthma. But to eradicate this disease, another course of treatment should be pursued.

* The chalybeate preparations best.

+ II

As it commonly appears, the most effectual remedies in the case are the various **tonicks**. It was formerly remarked by me, that the alimentary canal is generally disordered: when this happens, the management, in every respect, is precisely the same as in dyspepsia. Most of the remedies used in the last case, will be found equally effectual in asthma, & particularly when employed at an early period.* But this is the least difficult form of the disease, & the one requiring the simplest remedies. It often happens, that long after the paroxysm is over, dyspepsia, cough, and other pulmonary symptoms continue, & threaten serious consequences. These are occasioned for the most part, by effusions of serum, & some organick injury of the lungs. It is under such circumstances that **diuretick**s seem eminently serviceable. Of these, the **squill**, **digitalis**, & **Seneka**, alone, or in union with small portions of **calomel**, may be employed.

Not a little advantage may also be derived, in this stage from the habitual use of **garlick**, as it is attested by many physicians. And I am persuaded that one of the very best remedies, is common **tar**, exhibited freely in the form of a pill.

Cold bath an equivocal remedy.

These two articles, garlick & tar, in domestick practice, are generally employed together, & have deservedly acquired much publick confidence. To these I shall only add one other medicine, viz. myrrh. This is beneficial by itself, though its powers are sometimes enhanced by union with the Peruvian bark, or some other vegetable bitter, or aromatick article.

As the stomach in this disease is commonly a good deal affected, it is obviously requisite that the diet should be strictly regulated. Even when there are no gastrick symptoms, exactly the same rule as regards living, should be observed. No trespass in eating or drinking should ever be committed; and much care is necessary to guard against the vicissitudes of the weather by warm clothing, & especially by wearing flannel next the skin.

It is invariably admitted that exercise, & even labour, are very beneficial in the eradication of asthma. Long journeys frequently remove it; and, contrary to what might be expected, it is sometimes alleviated by the exhaustion & fatigue of a military life. To this point we have the testimony of almost all the writers on the subject. During the late war, when a large proportion of the population of this city

+ A large city is preferable to a village or the country
Dr Pilot makes elevated situation & when
Lounging – as regard proximity to sea Boat
effects very different sometimes very beneficial

X Dr. Chapman lectured on Angina Pectoris
this year (1825) before he lectured on Asthma.

turned out for its defence, & remained encamped for several months, two or three of my personal friends, who had been victims to asthma for a great part of their lives, were completely cured by the fatigue & hardships they endured.+

All these means, however, failing, you should recommend a change in the place of residence. The exact situation must be determined by the experience of the patient himself.* It sometimes happens that a very moist atmosphere is most beneficial to asthmatick people; & sometimes, on the contrary, the dryest situation is best adapted to their health & comfort.

# Angina Pectoris.

This is a new disease, having been described for the first time by the celebrated Dr. Heberdon, about half a century ago. 1768 It is of rare occurrence, so much so, indeed, that doubts have been entertained by some, whether it really existed.

As described by those who have seen most of it, the disease presents the following symtoms. The person is seized while fatigued with walking or

The sensation at the chest

some other exercise, with a painful sensation at the sternum, extending into one or both arms, (generally the left) at first no farther than the insertion of the deltoid muscle, but afterwards to the elbow, the wrist, & even to the ends of the fingers. As soon as he remains still, all the uneasiness vanishes. But when the disease has continued for some time & become confirmed, this does not so completely take place. The pain, under these circumstances, will come on while the patient is in a state of rest in bed; & will be excited by coughing, by speaking loud, by straining at stool, or by any mental exertion. But by far the most common exciting cause, is ascending a flight of stairs, or a hill, or any other height, inducing a disturbance in the circulation; & this is most apt to occur when the stomach is full. To the uneasiness already mentioned in the sternum & superior extremities, may be added, in cases of more violence, great anxiety, palpitations of the heart, laborious respiration, & a sense of suffocation, with many other distressing affections, which appear to threaten the immediate extinction of life.

As a general rule, angina pectoris selects for its subjects, the middle aged, & men more generally than women, & persons robust & corpulent,

with short necks, & those who are habitually indolent & sedentary, & often the gouty.

In relation to the pathology of this disease we know nothing that is at all satisfactory. It was generally believed by the early writers on the subject, to be spasmodick in its nature; though the part immediately affected was not designated or understood. This opinion was rendered probable by the general complexion, by its causes, symtoms & cure, & by its close analogy to the diseases confessed to be of a spasmodick nature, as the asthma. So close is its resemblance to this complaint, that it was called by Darwin, Asthma Dolorificum. But within the last few years, it has been attempted to be shown by Dr. Parry that it is a species of Syncope, denominated by him Syncope Anginosa, arising, as he alleges from ossification of the coronary arterey vessels. To this opinion it may be objected, that there is no necessary connexion between what he considers the effect & the cause. That ossification of the vessels of the heart, must be productive of great disturbence to the animal economy, is without doubt. But I shall never be induced to believe that the peculiar agony & distress in angina pectoris, are consequences of any derangement in these vessels. Completely to refute the hypothesis,

* Dr. Hosach.

i. previous irritation & excitement

all that is necessary is to mention, that several cases of angina pectoris have occurred, in which after death, dissections have brought to light no diseased appearances about the heart. And even where ossification has existed, angina pectoris, in many instances, has been absent. By a writer* of our own county it is contended, that the complaint consists in plethora of the blood vessels, particularly in accumulations of blood in the heart & large arteries. As I do not consider this opinion better founded than the preceding, I shall not enter into a detail of the facts adduced in support of his doctrine. It is sufficient for my present purpose to observe, that on the fullness & vigour of the circulation, he founds his hypothesis; which I am not disposed to admit, having met with the disease in cases of extreme debility and emaciation. This fullness & increase in the circulation, I take to be the effect, rather than the cause of the complaint. Do we not find that such a state of the heart & large vessels exists, without inducing angina pectoris? If mere fullness of the vessels be the cause ~~the cause~~ of the complaint, as is alleged by the author alluded to, we should find it occur as often as this fulness & increase of the circu-

+ dissations ?

lation takes place. Notwithstanding the number of dissertations on angina pectoris, not much light has yet been shed on it. This is owing to the great diversity of the phenomena, no two cases being exactly alike. It is said that sometimes no morbid appearances whatever can be traced in any part of the body. Most generally the heart is diseased by ossification, enlargement or dilatation, effusions in the pericardium, or large depositions of adipose matter. But in other instances morbid phenomena are found in other parts, the heart being perfectly healthy; as water in the chest, membranous adhesions of the lungs, and scirrhus & other diseases of the liver & the rest of the chylopoetick viscera. In one case all the phenomena arose from scirrhus of the pylorus. My impression on the whole is, that the primary seat of angina pectoris is the stomach, from which it is extended through the medium of sympathy to the pulmonary organs & heart, & that, in its nature, it is arthritick or gouty. To this conclusion I am led by the consideration of the causes & mode of attack, symtoms, cure, & appearances on dissection; & particularly the first, as all the cases which have come under my notice

x tending to lungs or heart.

Wine Whey

have ultimately turned out to be the gout. My time will not at present permit me to enter into a more minute defence of my opinion, nor is it required, as no new course of practice is suggested by it. But I will relate to you a few cases which have occurred to me, & leave you to draw your own conclusions.

Case 1st. There was a gentleman in this city who, for 20 or 30 years, was supposed by his physicians, to labour under angina pectoris. The symtoms were all strongly marked. After the death of Dr. Rush, I was called in consultation to the gentleman in an attack of what was considered angina pectoris. Believing, however, that it was really a case of gout, I recommended the attending physicians to treat it accordingly. Volatile alkali was given internally & sinapisms applied to the extremities. In the course of 2 or 3 hours a complete attack of podagra came on which, after continuing for 3 or 4 hours, in a single second, receded from the feet to the heart, & terminated the life of the individual. It is proper to remark, however, that he had discontinued the medicine & taken off the sinapisms. This case affords strong testimony in favour of my hypothesis, though it eventuated unhapily.

x Mr Ingersoll

Butler calls the discard

Case 2nd. There is now an eminent lawyer in this city who, many years since, was subject to attacks of a disease which, by Dr. Kuhn & Dr. Wistar was considered angina pectoris. Two or three months ago I was called in, & found him suffering with severe pain in his sternum, extending along the deltoid muscle, & reaching to the fingers. Believing the complaint to be gout, I treated it accordingly, & the pain soon fastened on his wrists.

Case 3rd. There is a lady whom I have a long time attended with what was supposed by Dr. Kuhn & Dr. Wistar to be an attack of angina pectoris. For 2 or 3 weeks she has been troubled with a severe pain, extending from the sternum to the wrists. Yesterday she drank water with red pepper infused in it, & 2 or 3 hours afterwards, I was called to see her with a confirmed attack of podagra.

It is perfectly well known that affections of the stomach & lungs produce a painful sensation about the arm & fingers. In my lectures on gastritis, I mentioned that this was one of the symptoms of that disease; & I also mentioned, while treating of hydrothorax, that pain in the sternum

There is one thing which distinguishes angina pectoris from every other pectoral affection – the paroxysm is brought on by the slightest exertion

see in Apoplexy

&, on the authority of Dr. Church, constriction & pain at the wrist, were not uncommon occurrences.

This complaint is sometimes confounded with asthma. But asthma commences generally in the night, continues longer, is attended with more wheezing, is relieved by exposure to fresh air, and gradually subsides towards morning.

The treatment of angina pectoris divides itself into that which is proper during the paroxysm, & that which is to be pursued in the interval. As soon as the patient is attacked, he should be placed in a state of complete rest & tranquility. Next, when the symptoms are urgent & the pulse is tolerably vigorous V.S. should be employed, & that it may prove effectual, the quantity detracted should be large. 20 or 30 ounces must be drawn at once, & in violent cases, it is necessary to repeat the operation nearly to the same extent, in a short time. The fact is, that sometimes the case is of such a nature as to admit of no delay; & if the practice be feeble & irresolute, it will prove inevitably fatal. My rule is to urge the lancet till relief is afforded, or as far as I can, consistently with prudence. But should this general depletion be contraindi-

Rhubarb or Warner's Cordial

cated, or insufficient, cups may be applied to the back & large blisters to the breast, with great utility. After these, the bowels should be freely opened with some active purge, as calomel & jalap or an infusion of senna. It will be perceived by you, that the practice I recommend differs materially from that which is laid down by the whole of the European writers. By practitioners abroad, an entirely opposite course has been adopted. Considering the disease as purely spasmodick, they run to a class of remedies which are best calculated, in their estimation at least, to overcome this form of diseased action. On opium, musk, ether, castor, Camphor & such articles, they exclusively rely. Undoubtedly, either in the incipient stage, or after the more violent symptoms have been subdued by depletion, any of these will answer exceedingly well. This is precisely what I should do, & have often done with great advantage. Called at the very commencement of an attack, you will generally find a dose of laudanum or ether to afford great relief; and after copious depletion either of these may be employed, & the musk julap will not be found less effectual. The point for which I contend is, that

+ Sinapisms &c. should be applied to the extremities.

the paroxysm, after it has been completely formed, can only be subdued by V.S. & the auxiliary means, or, at least, can be subdued by these remedies, more promptly than by any other.+

This brings us to the consideration of remedies proper in the interval, between the paroxysms, or those which are given with the view of preventing the return of the disease, & of completely eradicating it from the system. These are either topical or general. Every practitioner seems struck with the importance of establishing some counter irritation or drain in this complaint. Formerly it was the custom to accomplish this by perpetual blisters to the chest. But of late, the peculiar irritation of the emetic tartar seems to be prefered, & has been generally substituted. The manner of applying it, is either in the shape of a plaster, or by cloths wrung out of a saturated solution of the salt. It induces a very peculiar pustular eruption, of a nature very poisonous & difficult to heal, & very well suited to keep up a constant & permanent irritation. Whether it is productive of much advantage in the case before us, I do not know from my own experience. Cures, however, accomplished by this remedy alone, are recorded in periodical journals of England.

+ Nitrate of Silver

Not less is said of the efficacy of **issues**, applied on the inside of the thighs. Of cures effected by these alone, not less than 8 or 10 are recorded. These having been recorded by such men as Mc Bride & Darwin, there can be little doubt but that they really took place. When issues are objectionable, either from the prejudices of the patient, or any other cause, you may substitute **perpetual blisters**, applied to the wrists. They were very much extoled by the late Dr. Rush who believed them quite equal to issues.

The general remedies are the **tonicks**, so much relied on in the nervous & spasmodick affections. **Bark & valerian** at one time enjoyed a high reputation; but neither of these, nor any of the vegetable tonicks, are now much employed. A great deal more confidence appears to be placed in the **mineral articles**, especially in the **preparations** of **copper**, **white vitriol**, & the **preparations** of **silver**. Cures are said to have been performed by each of these, & two remarkable cases are recorded in the medical journals by Dr of York in England. It was stated by Dr. Rush that cures had been effected by white vitriol. Neither of these medicines has ever been used by me.

in carriage or on horseback

Entertaining a conviction that the pathology of the disease which I have delivered to you is correct, I have always acted accordingly, in the cases which have been presented to my attention. My plan is, in the first, to inculcate the importance of studiously avoiding all the exciting causes of the complaint; & in the next place, to consider the case exactly as one of gout, in which all those remedies must be employed that are best adapted to an atonick & disordered condition of the stomach, so that the disposition to spasm may be done away.

It is essential that the diet should be light & very easy of digestion; that the bowels should be kept open, & that exercise by gestation should be moderately employed. Riding on horse back will sometimes cure the complaint; but walking will always excite it.

As respects medicines, such as are applicable to dyspepsia or to atonick gout will answer exceedingly well. But when a strong impression is demanded, the remedies for the cure of spasm, to which ~~to which~~ I have already alluded, may be called in with advantage; though I have never seen a case which required them. I allude to the mineral tonicks.

Mineral preparation

As preventive of attack.

Plethora should be guarded against by purges & a low diet, or V.S.

In this way I have managed angina pectoris & have met with such success, that I cannot help recommending my plan to your attention. Whether the cases I have met with were the genuine disease, I cannot positively say. But certain it is that they were marked by the ordinary symptoms, & were considered the real disease by a large number of the most respectable practitioners of this city. Such Dr Rush, Mitchell, Duke

After all, however, you must not expect always to cure angina pectoris. Cases of it which have existed for a long time, are generally attended with organick derangement, & when this happens, they will prove wholly intractible by any, or every form of practice.

# Pulmonary Consumption.

To conclude the consideration of the morbid affections of the lungs, it only remains to deliver some account of pulmonary consumption. This is an undertaking on which we enter with little encouragement or satisfaction. Confessedly, no case of disease is involved in more obscurity, & there is no one in which the powers of our art are exercised with less certainty & advantage. It would appear that our want of success is partly owing to inherent difficulties of a very formidable nature, & is also, perhaps, in some degree attributable to ourselves. An ulcer of the lungs, which constitutes, undoubtedly, the worst form of pulmonary consumption, is necessarily tedious in its cure, from the loose parenchymatous structure of that organ. The same happens in all parts made up chiefly of cellular texture. An ulcer seated in such parts is *cæteris paribus* more difficult to heal. The difficulty arising from this cause ~~arising from this cause~~ is augmented by the movement of the lungs in respiration. By inspiration & expiration alternate contractions & dilatations

take place; & these disturb that state of rest which is necessary to the healing process. To these two causes, we may add a third, viz. the constant exposure of the ulcer to the air which, under all circumstances, proves very injurious in this respect. Denude an ulcer in any part of the body so that it may be constantly exposed to the action of the air, & you will find that the process of healing is much retarded. Notwithstanding these interruptions, however, we know that wounds of the lungs, of various kinds, do heal, without much delay or difficulty. To this end we have the testimony of many practitioners, especially of those attached to armies in actual service. Hence, it follows that the obstacles to the cure, proceed, in a great measure, from the altered condition of the pulmonary organs by disease; & that the difficulty is principally owing to the nature of the morbid action, as we shall presently see more fully illustrated. But as has already been hinted, it appears to me, that for our failure in effecting cures in these cases & for our having no distinct notion regarding them, we are ourselves in some measure responsible. We include under one head a great variety of pulmonary affections,

& apply with no discrimination, the same practice to each of these diversified complaints. My deliberate conviction is, that this sweeping sort of generalization is as mischievous in this as in any other case of disease, & that the first step of reform, both in the theoretical & practical view of the subject before us, is to contemplate it in its more minute & individual aspect. The word Phthisis signifies a destruction or wasting, & when applied to the pulmonary affection, denotes an ulcerated condition of the lungs. But, unquestionably, cases commonly considered as consumption may exist, run their course, & end fatally, without the slightest lesion or ulceration of this organ. All writers who have treated of this complaint, with hardly one solitary exception, consider ulceration as an uniform concomitant, & make it an essential ingredient in the definition. Cullen tells us that pulmonary consumption is emaciation & debility of the body with cough, hectic fever, & a copious expectoration of pus. It is evident that he here insinuates the existence of ulcers, & this more plainly appears in his subsequent history of the disease. By Bayle, in his description of the disease, it is laid down, that

* Phthisis in all ages from the child within the year to the patriarch; but most commonly in younger life.

The disease continues an indefinite time. Cases are mentioned by Bayle which terminated in 27 days; others where 40 years elapsed before death took place.

Portal 14. Morton 16

every organick affection of the lungs which, left to itself, produces progressive disorganization succeeded by ulcers & followed by death, should be considered as phthisis pulmonalis. It is not my intention formaly to criticise on either of the definitions above stated. They appear to me defective in several respects, & especially because they exclude many diseases which, however they may resemble consumption in all their symptoms, are unattended with ulceration.

It is difficult to define consumption, so diversified are the forms which it assumes in different cases. No practitioner has ever met with the complaint so unequivocal in its characteristicks, that when called on to include all the varieties under one definition, he would not be greatly perplexed embarrassed. To obtain precision in this case, it will be better to consider each species distinctly, & such a plan I shall now pursue.

By the old writers, & particularly by those much addicted to artificial arrangement of diseases, consumption has been divided with absurd minuteness. Eighteen 20 species of the complaint are made by Sauvage, & the catalogue

The tubercles are situated in the cellular structure & not in the air cells, as formerly imagined. They are white or grayish, & are inorganic – no vessels exist in them – the smallest are called miliary

has even been increased by some modern nosologists. As, in my opinion, the only reason for the division of diseases is to obtain particular practical precision, I shall be content with proposing the subject to you under a much more limited number of forms.

The first species which I shall treat of is commonly designated by the term Tubercular Consumption. Before proceeding to describe the symtoms of the case, I shall say a few words on the nature & appearance of the tubercles, which are supposed to be the cause of consumption. As the meaning of the term informs us, they are small bodies or masses of indurated white or grayish substances found in the upper & portion part of the lungs. By Stark, who has given us the best account of these, it is said, that on dissection of persons who have died of this disease, the tubercles are found of all sizes from that of a grain or granule, to the bigness of a chesnut or horse bean, & are generally found in clusters. On cutting into them, they appear of of a white, smooth, cartilaginous nature. In the smallest ones no opening is distinguishable; but in such as are farther advanced apertures like pinholes, are discoverable. The tubercles which are still larger have one or more cavities containing a

*By Lanaec it is asserted that when a person labours under tubercular consumption, tubercles are found in other parts of the body.

Bayle & Lanaec say they arise without previous inflammation – but I have no doubt they arise from that species of inflammation which B. ~~[illegible]~~ constants has denominated serous or lymphatic – white inflammation; no doubt modified by a scrofulous diathesis –

fluid resembling pus which being removed, small openings are perceptible in the pellow, & more purulent matter may be pressed out by pressure between the fingers. The largest tubercles, on being emptied, are found to be capsules into which enter a branches of the wind pipe. As relates to their origin or mode of production, nothing precise or definite is known. It is generally supposed that they are intimately connected with a strumous or scrofulous diathesis; & by some it is alleged that they are mere enlargements of the lymphatick glands. But whatever may be the correctness of the first part of the proposition, (which is sufficiently established, at least, in a large proportion of cases) the second part is wholly unfounded. To express myself more clearly, I entertain little doubt that the tubercles are intimately connected with a scrofulous state of the system: but I do not believe that they are constituted by enlarged lymphatick glands. No part of the body has so few of the glands as the lungs;* & even admitting their existence, there cannot be one where there are 100 of the tubercles. By the dissections of Bayle, it appears that they are occasioned by mere depositions of matter from the capillaries; that some of these are cheesy; some cartilaginous; some osseous, & that, occasionally, they

* ~~But~~ They may act as an irritant ~~&~~ produce hectic fever, even if suppuration does not take place, * and are then called <u>open</u> <u>vomica</u>.

are composed of matter which cannot be compared to any thing, so peculiar is its nature. Thus formed, the tubercles often remain for a length of time, sometimes for many years, indolent & inactive, with little or no increase in the size. At length however, excited by the ordinary causes of inflammation, they take on a morbid action, & constitute the disease called pulmonary consumption.† At first these tubercles enlarge, become red & more vascular. Then in the centre, one or more cavities are formed into which are poured small quantities of pus. These cavities gradually increase, & the tubercles by degrees loose their compact structure, & are converted into abscesses, denominated, in medical language, vomica. These bursting, discharge their contents into the bronchia.† After the rupture of the abscess, the ulcer rapidly advances, till finally the whole substance of the lungs is destroyed or involved in one mass of disease.‖ It is now that hectic fever makes its appearance, & the strength of the patient sinks with prodigious rapidity.‡ It sometimes happens that only one tubercle at a time takes on the suppurative action, & under such circumstances the progress of the case is exceedingly lingering & protracted. Now & then the ulcer heals, &

+ This opinion is further confirmed by dissection - Bayle & Lanaec have found cicatrices -

# It

repelled eruptions as

+ and developed itself about puberty but a

a temporary remission or suspension of the disease, encourages the hope of an entire recovery. But this state of things is delusive, & does not long continue. One or more of the tubercles inflame, & a repetition of the preceding symtoms takes place, & thus the case runs on, with alternate hope & disappointment, till at length the patient becomes completely exhausted & sinks under the disease.+

Of the exciting causes of consumption to which I alluded, the most common are catarrh; ill-cured pulmonary inflammation; repelled eruptions; sedentary occupations, & particularly such as require the body to be continually bent, & those employments in which acid & irritating particles are thrown off & taken into the lungs, as stone cutting, milling, grinding of needles, & working in metals from which fumes of an acid & irritating nature are disengaged. To these may be added playing on wind instruments, as the flute & clarionet; debauchery, or excess in eating & drinking; the suppression of any accustomed evacuation, as the menses or hemorrhoides, & certain states of the air & peculiarities of climate, of which more hereafter. It is said that females are more subject to it than males.+

Tubercles, in the commencement, are attended

without dyspnoea –

with slight & short cough which, after awhile becomes habitual, & is often little remarked by the person affected, & sometimes so little as to be absolutely denied by the patient himself. At the same time the respiration is easily hurried by much labour or exercise, & the patient becomes languid & indolent, & there is generally some pain in the breast or under the point of the shoulder. This state will sometimes continue for a year, or even two years, without any complaint being made respecting it; except only that there is a greater liability to be affected with colds than usual, which are frequent & difficult of cure. These, however, being supposed to arise from the ordinary causes, do not disturb the patient or his friends, & therefore lead to no precautions. On one or another of these occasions the cough becomes more considerable & is particularly troublesome on laying down at night. Frequently, at this period, a small vessel gives way & tinges the mucus with blood. This calls for the closest attention, especially if the increase of cough comes on in the summer season. Scrofula is always more alarming in summer than in winter, as it denotes a firmer fixture & establishment of the disease. The cough, when it first comes on, is, for a considerable time, without expectoration. But when from repeatedly

There is generally pain in some part of the chest; but I have known the disease to run on without, any pain or cough till the latter stages.

catching cold, the patient is affected with a severe cough, there is then some expectoration, which is more considerable in the morning. The matter thus coughed up by degrees becomes more copious, more viscid, & more opaque. At length it assumes a yellowish or greenish colour, & a purulent appearance. The whole of the matter, however, is not changed in this manner; but while one part retains the appearance of mucus, the other is changed as above mentioned. The pulse, which in the first stage was quick & irritable, now becomes hard & chordid, & sometimes is not affected during the whole disease. The adnata becomes pearl colour & glassy; the cheek bones prominent; the countenance haggard; colliquative diarrhoea ensues; adematous extremities, & finally aphthæ & inability to expectorate, & the sufferer either ~~[illegible]~~ gradually dies, or instantly suffocates. The species of the disease most certainly fatal & at the same time difficult to be distinguished, is where every symtom exists, but there is no cough or expectoration in the least.

As the complaint progresses, the cough becomes more frequent, & particularly troublesome at night; the matter assumes still more the purulent appearance; & the emaciation & debility are increased

+ Yet this is not universally the case – it often occurs in those in whom these marks of a morbidous diathesis are lost

By Bayle the disease is divided into six species – 1. Tubercular, – 2. Granular, – 3. Melanosis, – 4. Ulcerous, – 5. Calculous, – & 6. Cancerous. – He might also have added, Osseous. It is admitted by Bayle himself that it is difficult, if not impossible to distinguish these different varieties before death; & I am not aware that any advantage would result from the knowledge, even if it could be obtained – all cases would prove alike fatal.

from the occurrence of hectic fever.

This is a very short account of pulmonary consumption as delivered by Dr. Duncan, a Professor at Edinburgh, & a physician of great eminence. It is not very difficult to distinguish tubercular consumption from the other forms of the disease. Besides the peculiarity of circumstances under which it commences, there are almost always peculiarities of form & constitution which predispose to the complaint and assist us in forming our judgment: such are the long & delicate neck, the narrow chest, the prominent shoulders, the high cheek bones, delicate complexion, thick upper lip, light hair, thinness of skin, large, prominent veins, weak voice, much sensibility, great vivacity of mind, & all the other signs denoting a scrofulous diathesis.*

We now come to the treatment of this form of the disease. It is obvious that this must be exceedingly different under the various circumstances of the case. The indications, however, in the first stage are clearly marked out. The principle or leading object is, plainly, to suppress the progress of inflammation in the tubercles, so as to prevent suppuration, and its mischievous consequences. Of the remedies calculated to meet this indication, the most powerful and

efficacious is, undoubtedly, **venesection**. It is now nearly a century, since this remedy was introduced into the management of the early stage by the celebrated Dr. Dover, well known to you from the powder which goes by his name. It was advised by him that at first a portion of blood should be taken every day for 8 or 10 days, & afterwards every 2 or 3 days, for a much longer time, so that, in some cases, the patient was bled more than 50 times. By this abuse of the remedy, it fell entirely into disuse or discredit; and, as often happens in such cases, a practice directly opposite was recommended. To the late Dr. Rush the credit is, indisputably due of having restored the practice, so far at least as regards our country, & of regulating with a sounder discretion & a wiser judgement. To you, into whom the principles of medicine have been so carefully instilled, I need not remark, that in this & other cases, you should be governed in the use of the lancet by the condition of the pulse & by those other circumstances which assist us in obtaining a knowledge of the state of the system. As circumstances which should influence you in the employment of V.S., you should always bear in mind, on the one hand, the vast importance of subduing inflammation, & on the other hand, the

extreme debility which often attends the case, & the direct tendency of the remedy to hasten & increase this exhaustion*. After you have bled your patient as far as you may deem it prudent, you may next resort, as auxiliary means, to **topical bleeding**. This is to be effected by the employment of **cups**; & most undoubtedly, the greatest advantage results from this remedy in the early stage of pulmonary consumption. It is, I have reason to believe, in the generality of cases, preferable even to the use of the lancet. It relieves the inflammation of the tubercles as effectually, & does not, to the same extent exhaust the strength of the patient. But if there is much force in the circulation, & other unequivocal signs of active inflammation, then have recourse to the **lancet**, & employ it very freely. There are indeed cases of consumption, in which depletion in no form can be employed, the debility already existing being so great, that the detraction of the smallest portion of blood, would be followed by the most serious consequences. Here we may resort with unequivocal utility to the use of what is called **dry cupping**, or in other words, the application of cups to the whole chest, without previously making scarifications. The manner in which the remedy operates must be perfectly intel-

ligible to you all. It invites the circulation, from the lungs to the surface, & thus obviates the inflammation, & retards the advancement of the tubercles to suppuration. This mode of practice has been much adopted in this country, & in attestation of its efficacy, we have the testimony of the most respectable physicians. It is a remedy of which Dr. Physick is perfectly enamoured from the good effects recently derived from it, by him, in several cases of pulmonary consumption.

The immense advantage of establishing some counter irritation in this complaint has long been known & acknowledged. This is accomplished by a **blister**, **seaton**, **issue** or any thing of a similar character. I do not believe that there is much difference in the efficacy of these three modes; & you may employ the one or the other as you find it most convenient, & least objectionable to the patient. But to obtain the full effect from the blisters, they should be kept so as to produce a considerable discharge, & then dressed with stimulating ointments. Of late it has become very much the fashion, as well in Europe as in this country, to substitute the application of **tartar emetick**, to which I have on more than one oc-

* More advantage will be derived from the repetition of the blister, than by keeping up the old one.

casion alluded. [But I have reason to believe that this is recommended by very little except its novelty.] It has frequently been tried by me within the last eight years, & I am not sensible that I have derived from it so much advantage as from the perpetual blister*. It is useful but not more so than the old fashioned vesicating applications. It is far more disagreeable to the patient, inducing more pain, & therefore is more obstinately resisted.

Emetics have been greatly extolled in the early stages of pulmonary consumption. That they are beneficial cannot possibly be doubted. To this point a vast deal of evidence might be collected from all the writers who have treated of the subject. They operate efficaciously in different ways. First they permanently equalize the circulation & excitability; & secondly they promote absorption, as is proved by the effect in dispersing buboes & other glandular tumours. In addition to these, they operate beneficially in a manner which cannot readily be explained. Of this fact I am convinced from having again & again witnessed their effect in a great variety of cases. Much difference of opinion has existed as to the comparative pow-

ers of different emetics. Ipecacuanha, however, is generally prefered. It is a medicine which I have commonly employed, & I have always had reason to be satisfied with it. But the white vitriol is prefered by some of the European writers, who declare that it is better adapted to consumption than any other emetick. Why it should be so, has by no means been explained in a manner satisfactory to me. That, however, you may derive the full advantage of vomiting, you should not too suddenly desist. An emetick should be given daily for a week, or even two or three weeks, in order that it may prove serviceable in the disease. By this frequent repetition of the remedy, you imitate the effects of a sea voyage which has so often been beneficial in phthisis pulmonalis. During my residence in England, this practice was chiefly relied on, especially in the English Hospitals, in the first stage. Like all other modes it was followed by various success. But, on the whole, it appeared to me to justify the high degree of confidence reposed in it. Certain it is, that I have often seen tubercular consumption, in the early stage, removed by repeated vomiting. Dr. Simmons has written the most able work on this subject. His experience was

very ample, he tried every mode of practice, &, at last, he was led to the conclusion, that vomiting used in this persevering manner was infinitely the the most successful.

In my lecture of yesterday, I detailed to you some of the remedies employed in the first, or inflammatory stage of consumption. As a part of the same plan of treatment, it is very customary at this stage of the complaint to resort to those articles, calculated to reduce the force of the circulation. By many practitioners the saline purgatives are prescribed for this purpose, & though sometimes beneficial, they vary exceedingly in their effects. You should carefully guard against an abuse of them, which is productive of mischief in every stage respect or variety of pulmonary affection. You should be content by merely keeping the bowels open. It is a much more common and perhaps safe course, to meet the indication before us by the antimonial articles in minute doses, alone, or in combination with nitre. What is denominated the antimonial powders, without the calomel, will be found to answer very well, & is greatly employed in the practice of this city.

It is, perhaps, known to you, that mercury has

been highly extolled in every stage & form of pulmonary consumption. But this, though generally considered so, is, certainly, not a new practice. As long ago as the commencement of the last century, it was employed by Dr. Radcliff in the case of king William. And about the same era, it appeared to be the favourite remedy in pectoral complaints. It is also part of the treatment recommended by Mosely in his celebrated dissertation on pulmonary consumption. It appears, however, that, except in some cases hereafter to be mentioned, the practice lost all its reputation, & for a great length of time was totally abandoned. That it is occasionally beneficial in phthisis pulmonalis cannot possibly be denied. It would be perfectly easy to collect, as occurring within my own personal observation, a number of cases of this disease, relieved, or perfectly cured by means of a salivation.

But not one of these cases, I am persuaded, was genuine, or tubercular consumption. The form of the disease to which mercury is applicable shall presently be designated. It is enough, at present, to state, that it is mischievous in every stage of scrofulous or tubercular consumption; & by no practition-

er, either here or in Europe, is it now prescribed under these circumstances of the disease. During that period when the most sanguine expectations were indulged, especially in this country, with regard to the powers of mercury over that horrible complaint, the medicine was generally indiscriminately employed in every case. The consequence was, that it produced so much harm as to deter practitioners from using it. So that, at present, it is pretty much abandoned, even by those who formerly placed the utmost confidence in its powers. Why mercury should be prejudicial in pulmonary consumption, considering its great utility in scrofula is not intelligible. Exactly the reverse would be expected, if we were to rely on analogy alone. But of the fact of its doing harm in scrofulous consumption, not the slightest doubt exists. It will, indeed, in some cases, operate most poisonously in this complaint. More than one instance I have seen where the disease was in the incipient stage & the patient still able to attend to his occupations out of doors; but mercury being given, he was instantly rendered worse & in the course of a few weeks destroyed. A rapid increase of all the symtoms took place, with a de-

crease of all his powers. This, gentleman is no sentiment peculiar to myself. As far as I know, all the ablest practitioners of this place concur with me, & I am also supported by the united experience of the medical world. Among those who had the greatest confidence in mercury in consumption generally, & especially in the hereditary kind, was Dr. Rush, who, at one time, considered it as the anchor of hope in the complaint before us. To my certain knowledge a few days only before his death, he refused to prescribe the medicine, having lost all confidence in its powers.

What report shall I make to you of digitalis in this disease? Not a great length of time has elapsed, since the confidence of the medical publick was almost unbounded in the article. Medical faith, indeed, was so strongly placed in it, that consumption, even in the last stage, was by the agency of this remedy, to become almost certainly submissive to our control. It is hardly necessary for me to remark, that the high wrought expectations, & brilliant prospects, have never been realized. Nevertheless it does appear, after making the proper deductions for the enthusiasm of the moment, that digitalis manifests ample powers in

some cases of pulmonary consumption. To deny, indeed its utility in this disease would be to disregard, altogether, some of the strongest evidence we produced in favour of the remedy. By Darwin it was early spoken of as an important article in the treatment of some forms of consumption, & not long afterward it attracted general attention. It was resorted to by Ferrier, &, according to his report, with almost invariable success. But no one has had experience so extensive as Dr. Drake, & his opinion is favourable to the remedy. "The article", says he "has been given, several years, in pulmonary ~~consumption~~ hemorrhage with effect, & certainly will continue to be with the intelligent whatever may be the result of its trial in phthisis. I am happy, however, to say that the success which has hitherto attended the exhibition of the digitalis in phthisis, under my observation, has been very considerable. Several patients in its confirmed state have been cured by this remedy, & almost all have been relieved. Life has been protracted by it, & when death has taken place, whilst the system was under its influence, it has been free from pain & struggles. My expectations have been completely answered by the remedy". The paper of Dr. Drake contains the history of 15 well delineated

cases of consumption treated by digitalis, & the result was, that 9 were cured, one greatly relieved, & 5 died. These cases, if authentick, are alone sufficient to entitle the remedy to a great degree of confidence. But I doubt exceedingly whether so large a proportion of cures in pulmonary consumption were ever effected by a single article, or by any combination of remedial articles whatever.

Nearly about the same time that Dr. Drake experimented with the digitalis, a series of trials were also instituted by Dr. Fowler with less effect.

Next came the celebrated Dr. Beddoes, who, in his treatise on consumption, after having informed us that his own experience fully verified the observations of the two last mentioned physicians, uses the following forcible language. "I daily see many patients in pulmonary consumption advancing towards recovery with so fair a pace, that I hope consumption will hence forward, as regularly be cured by the foxglove, as ague & fever is by the Peruvian bark. Could we obtain a single auxiliary for foxglove, as we have in many instances for the bark, I should expect that not one case in five would terminate as 99 in a 100 have hitherto terminated. But I believe that a majority of cases will yield to digi-

talis alone. It is evident that no new cases may be suffered to advance beyond the first stage, without the application of this medicine."

In the year 1800, Dr. ~~Macquennet~~ McGinnis, physician general of the naval hospital at Plymouth, in England, determined, if possible, to settle the question by an extensive & diversified series of experiments with the medicine. He possessed every advantage for accomplishing his purpose. The cases which came under his care were numerous, & being in a publick institution, he could insure those observances in the exhibition of the article which were necessary to the fulfillment of his design. But with every allowance for the peculiar circumstances under which he was placed, his success was extraordinary & wholly unprecedented. The whole number of patients amounted to 77, of which 53 were advanced to the purulent, & 24 were in the incipient stage. Of these 44 completely recovered, 23 discharged much relieved, & 10 only died. It is worthy of remark that in all these cases of recovery, the pulse was reduced very considerably below the natural standard, & the amendment always appeared commensurate with the degree of reduction of arterial action.

In the medical journals of this period, many cases

of consumption treated by digitalis, were recorded, & generally by respectable practitioners. From these we may collect, that this article frequently effected cures; & even when it failed to do so, it almost invariably produced an alleviation of the distressing symtoms.

Notwithstanding all the accumulated reports in favour of digitalis in consumption, of late it has unequivocally lost much of its reputation, & seems rapidly to be falling altogether into disuse. To the extreme praises succeeded more temporate applause of the practice in consumption. Comparatively, little has recently been said of it. The periodical journals no longer contain any cases of its efficacy, or discussions relative to its powers; & those which so short a time ago recommended its employment, regularly, in the treatment of consumption, do not, at present, mention it as a remedy of much importance. But this is running into a contrary extreme. No doubt can be entertained of the efficacy of foxglove in some cases of consumption. It is equally true however, that the success has been very variable, &, for the most part, extremely precarious. It appears that many cases under the denomination of phthesis pulmonalis are recorded to have been benefitted by the

remedy; yet when the symtoms have been so far advanced as to be unequivocal, the benefit was not permanent: &, on the whole, we may safely affirm, that the degree of success is much less than has been stated, & than we had reason to expect. Determining from my own experience, I should state that the medicine is applicable only to the early stages. This, indeed, appears to be the view taken of the subject by all the late writers whom I have consulted. A late work of Dr. Hinglake, more celebrated for his treatise on the gout, 14 cases are recorded, chiefly in the incipient stage, in one half of which, digitalis was of decided advantage. But in the ulcerative or suppurative stage, only one cure was accomplished by the remedy.

By Dr. Mc. Lean, a late writer on phthisis, it is stated, that the foxglove "will sometimes cure when the most approved remedies fail. When of itself it is insufficient to subdue the disease, it will prove a valuable auxiliary to other means. It has always, with me, quieted & soothed the sufferings of the patient, & when it ultimately failed, it lengthened the duration of life & smoothed the avenues of death." He goes on to say; "this is all, I apprehend, it will be found capable of performing; but

this is doing a great deal. Those who expect wonders from it, or that it will, in general, cure consumption, will be disappointed."

In a still more recent work on the complaint by Dr. pretty nearly the same language is held. (Here Dr. Chapman read from the work alluded to, beginning with the remark, "that only in the incipient stage could we expect any advantage.")

In the preceding review, I have treated with some minuteness, the progress of opinion relative to the power of digitalis in pulmonary consumption; so that you may be enabled completely to appreciate its degree of efficacy, & to determine hereafter when you shall be engaged in practice, how far that celebrated remedy is entitled to your confidence. Notwithstanding, however, all that has been said the subject, the case of pulmonary consumption has not been clearly made out, in which digitalis is most applicable. After all, much must be left to that sagacity & power of discrimination which are derived only from observation & reflection. But I must remark, that according to the late experiments on digitalis, it is alone suitable to the early & incipient stage of the complaint. Even here, however, in some

cases, it not only totally fails in effecting a cure, but produces manifest injury to the patient. Of all remedies, it is the most equivocal; & respecting its effects in any case, it is impossible, with the least certainty, to determine *a priori*. In my very last consultation with the late Dr. Wistar, he asked me what was the result of my experience with regard to the foxglove. I told him, that even in the forming stage, I had been so repeatedly disappointed, & had so often discovered that it was productive of mischief, that at one time I had resolved never to employ the remedy in consumption; but that now & then, in desperate cases, I had been so much delighted & surprised at the effects it displayed, that my determination had been overcome, &, under certain circumstances, I was now in the habit of resorting to it. He told me that he fully concurred with me in my estimation of the medicine. The case in which it was most generally found beneficial I will state to you. Now & then there occurs in delicate, irritable habits a slight hæmoptysis, attended with cough, pain in the side & breast, an accelerated pulse, & considerable debility, in which the symtoms are sufficient to excite great solicitude for the safety of the lungs; though neither dyspnœa

* The prussic acid has been used with different success.

nor purulent expectoration may be present. In such cases V.S. is inadmissible to any extent on account of the weakness of the patient. It is here that digitalis, given as a substitute for the lancet, in such doses as to subdue the pulse & keep it down, is found most generally to succeed.*

These are the proper remedies to be employed in the early & what is deemed to be the inflammatory stage of tubercular consumption. But when the disease is not arrested, abscesses form as has already been described, & hectic fever with its horrible consequences, ensues. The case may now be considered as entirely beyond the control of medicine, and almost inevitably fatal. Cures even at this advanced stage have not unfrequently been effected in the other forms of the complaint, but never in tubercular consumption: so far at least as my observation extends, which, I suppose, is not very different from that of other practitioners. But even under these desperate circumstances humanity as well as a sense of duty demands that we should not withhold our exertions. We can at least afford some palliation of the more violent symtoms, and some alleviation of the distress, & it is right that the remedies which appear best adapted for this purpose,

should be fairly tried. The leading indication at this conjuncture is to abate the hectick fever, which is so exhausting if permitted to continue unresisted. But of this affection, & of the remedies suitable to it, I formerly so fully treated, that nothing at present remains to be said. Whether it arise from abscess in the lungs or in any other part of the body, it possesses an identity of character, & is to be managed by the same means. It uniformly wears the intermittent type, & exacts the same remedies as those which are employed in the ordinary fever of this description; viz. Peruvian bark & the other vegetable tonicks, to which may be added arsenick, sugar of lead, sulphur, & certain preparations of steel. As this species of consumption is so generally thought to be of the nature of scrofula, it may readily be supposed that the remedies beneficial in the latter case have not been overlooked. Consulting the writers on the subject you will accordingly find, that the whole of these, as opium, dulcamara, hemlock, guiacum, sarsaparilla, &c. have been administered, & with no advantage. My success with **nitrick acid** in healing scrofulous ulcers, led me to hope, that benefit might be derived from it, under certain circumstances, in consumption. I have,

* He found vinegar most efficacious in hectick fever.

accordingly, given the medicine, & found it to be of some advantage.

Actuated by the laudable wish to discover some remedy for this fatal malady, Dr. Roberts, a distinguished physician of London, has lately instituted a series of experiments with almost every article of the materia medica. Besides the remedies usually employed, he tried the nitrate of silver, the white oxyd of manganese, the black oxyd of cobalt, the muriate of barytes, & phosphoric acid. But most unhappily he did not succeed, & his publication is only a record of his failure in his well meant endeavours in the cause of humanity.*

I had in my last lecture on the subject, arrived to the second stage of pulmonary consumption, & delivered an account of those general remedies, best calculated for the treatment of that complaint. Of late the practice has been revived in this city of attempting to heal ulcers of the lungs by the inhaling of certain vulnerary & balsamick substances. What is the precise degree of benefit thus derived, I am unable to say very positively. My own experience is not very much in its favour, though I do not absolutely condemn the practice. More than one of my medical friends speak favourably of it, & I am not disposed to

contradict them. The articles employed for this purpose, are the terebinthinate preparations, and the balsam of Tolu. The former I have uniformly found so irritating to the lungs, that I cannot help thinking them highly injurious. They always excite cough, & thus very much aggravate the complaint. It was remarked by me that this is an old practice renewed. That it is so, there cannot be the slightest doubt, though it is claimed as original by those who have lately recommended it. But in Bennet's celebrated work on pulmonary consumption, which was written 100 years ago, I find that the practice is strongly advised, & particularly the inhaling of the fumes of sulphur & the balsams. Could we believe half of what he has said on the subject, we should entertain a high opinion as regards the efficacy of the remedy. By this alone he avers that he has frequently been able to heal ulcers of the lungs, & thus to effect a cure of the disease. Not long after Bennet, Dr. Medge, the inventor of the inhaler which bears his name, recommended the vapour of sulphuric ether. The celebrated Linnaeus afterward suggested the hypericum, a resinous article, as superior to any which had been previously tried.

+ The best is made by pouring a pint of boiling water on an ounce of balsam of Tolu.

Stramonium, tobacco & opium may be smoked. The inhalations of tar is very beneficial in relieving dyspnoea by expectoration.

But of these articles, the ether is undoubtedly the best, & may be administered alone or impregnated with hemlock. Take ℥j of the powdered leaves of the hemlock & ℥iij or iv of ether; &, after digesting them together for 2 or 3 days, apply the liquor to the mouth of the patient in such a way as that he may inhale the vapour. This is exceedingly useful in pulmonary consumption, &, if it does not effect a cure, it relieves the cough, dyspnoea & oppression. +

On principles not altogether different the inhalation of atmospherick air variously combined with the irrespirable gases, has been tried. To give this remedy a fair trial, the late Dr. Beddoes established at Bristol, what he called the Pneumatick Institution. It was proposed by him to inhale carbonick acid gas; under the impression that it would correct the foul ulcers, & dispose them to take on the healing process. But however plausible in speculation, when put to the test of actual practice, the remedy, I have reason to believe, proved wholly unavailing. There is no case, as far as I know, on record, of a cure of pulmonary consumption by this management.

Exactly similar views suggested to the same enthusiast, that the patient should inhale the vapour

from cows. To effect this, the patient was required to continue day & night with this animal - to live in the stall as well as sleep there. Absurd as the practice may appear, cures in 2 or 3 cases have been effected in this way. One was in the daughter of the celebrated Dr. Priestly, & the other in a lady of distinction in England. How it operates is not at all intelligible. It is said, however, that the vapour from the breath of the cow has a salutary effect.

As you may readily believe, I am exceedingly incredulous as to the utility of this remedy, & would by no means recommend an imitation of the practice. It is, however, sufficiently curious to be mentioned, that those persons, whose avocations lead them to great intimacy with animals, & particularly when they receive the exhalations from their carcases after slaughter, are totally exempt from consumption. From the extensive inquiries of Dr. Beddoes as to the modes of life or employments most apt to favour, or to oppose the prevalence of consumption, it appears, that, of all the butchers in England, hardly a single one was affected with the disease, or had a tendency to it. Tanners & curriers are likewise said to be exempt from it. It is also said that those who work in animal jelly, particularly the manufacturers of glue, equally escape the complaint.

Among the other projects for the cure of consumption, is placing the patient in a hole dug in the earth. The practice was originally brought from Spain. Notwithstanding some attestations in favour of the remedy, its efficacy is exceedingly problematick. It was tried by Dr. Duncan & other physicians of Edinburgh when I resided in that city. But so far was it from doing good, that it aggravated the complaint by inducing catarrh. If the practice had been used in Ireland instead of Scotland, it would have been considered as a blunder or a bull. To place the patient in the grave, seems more applicable to one who is already dead, than fitted to effect a cure in those who are alive.

As the disease advances certain affections arise of a nature so urgent as to demand particular attention. As these are symtomatick, all that we can do is to palliate the more distressing & to effect a temporary relief. Of the affections alluded to, one of the most troublesome are the night sweats. As these arise from debility of the exhalants, they are most effectually checked by applications made to the parts affected. By sleeping in flannel alone, I have known the effect to be produced, & especially if the surface were previously rubbed with some stimulating article

as brandy or salt. Of the internal remedies the most effectual are the mineral acids, especially the sulphuricks. This may be used alone, or in combination with the vegetable bitters, which also have been recommended. Now & then advantage may be derived from prepared chalk, or oyster shells, or what will answer still better lime water freely taken. Extraordinary as it may appear, I have known some mild diuretics, as the juice of the water melon, parsley tea, or even cold water to afford relief in the night sweats. Their mode of operating is very obvious. It consists in derivation of action from the surface to the urinary organs. Sometimes it happens that the sweats are checked by strongly exciting the exhalents with the active diaphoreticks. The practice is of doubtful utility, & is rarely employed. But cases may occur in which the remedy may do good. We often check diarrhoea by purging & on the same principle diaphoreticks may prove efficacious in the case before us.

As regards diarrhoea, another of these affections, I have already treated fully on the subject, & shall not, therefore, detain you further. The remedies are precisely the same with those which are given in the primary form of the complaint. It is proper to state

+ Dissections show that it depends on ulceration of the ileon & large intestines.- The best remedy on the whole is anodyne injection.

purging at this period of pulmonary consumption is particularly mischievous from the extreme debility which it induces, & hence should be checked as soon as possible. To mention this is more important, because diarrhœa is apt to relieve the cough, and check so much the other symtoms, that, if not apprized of the consequences, the patient, as well as the practitioner, may be induced to suffer it to run on to a dangerous extent. +

At this stage the cough which throughout is troublesome, becomes exceedingly aggravated & calls for relief. Most of the mixtures mentioned under the head of peripneumonia notha are here useful. The preparations of nitrick acid, & the milk of gum ammoniac, are exceedingly so, & especially if there is much dyspnœa. It is here also that the balsamick articles sometimes evince their very best powers. The balsam of Tolu is to be prefered; though the copaiba & other kindred articles are not without utility, & may sometimes be administered when the former is not applicable to the case. There is an article vended in this city & other parts of the United States, called the balsam of honey, which is admirably adapted to the last stage of consumption. It is essentially composed of the balsam of Tolu; so blended,

however, with other articles, that the mixture is much more agreeable to the palate than the simple undisguised medicine. It is not long since great confidence was reposed in the balsamick remedies, in the complaint before us. But they were condemned by the celebrated John Fothergill, from their heating & stimulating qualities. Even since the appearance of his publication, they have been less employed, & now rarely resorted to, either in this country or in Europe. But I am convinced of their great utility, & that they are productive of injury only when injudiciously applied. Employed as they formerly were, in every stage & variety of cough, they do harm & cause the patient to experience great pain. But the fault lies with the practitioner & not with the medicine. After all, we must chiefly rely on **Opium** as a remedy for cough. Accordingly this medicine enters largely into all the cough mixtures, of which it forms the most active ingredient, & in which it can rarely be dispensed with. When it produces no permanent impression, it relieves the more distressing symptoms & alleviates the disease. But I have reason to believe that it accomplishes more than mere palliation. In those cases, especially, which arise from other causes than tubercles, I never derived

Ed Oedematous extremities relieved with warm brandy frictions, or laudanum ℞: applied by gargles

more benefit from any plan of treatment, than from the liberal use of Opium. This remedy alone, cured a case completely, in the Alms House. It is perfectly well known that ulcers of various kinds are healed under the use of this article; & it must be particularly applicable to those of the lungs in which it is necessary to keep these organs as much at rest as possible.

This concludes what I had to say on the subject of tubercular consumption. I should not have entered so fully into it were it not for the circumstance, that the treatment adapted to this, is also, with some variation, suitable to the other forms.

## Catarrhal Consumption.

I am next to call your attention to catarrhal consumption. This differs from the former species in several particulars. It occurs without any constitutional predisposition or strumous diathesis; & instead of the substance of the lungs, it is seated in the membranous lining of the trachea & its ramifications, the bronchia.

It commences always as a simple catarrh, & indeed may be considered as that complaint protracted &

confirmed by ill management. It may generally be distinguished from tubercular consumption; though the two cases are sometimes analogous in all their leading symptoms. At first the disease puts on all the appearances of common catarrh, & is attended with cough, pain in the side & breast, with some soreness of the throat, usually ascribed to the efforts used in coughing. There is much expectoration of phlegm & mucus which generally changes its character & becomes purulent; &, at last, pure pus is evacuated. It is now that ulcers are believed to exist by a majority of practitioners. But this is not the case. Dissections of persons who have died of catarrhal consumption show that the purulent expectoration is merely a secretion from the membranous lining of the trachea & bronchia; & so far is ulceration from being present, that it is said, that the lungs hardly ever exhibit any phenomena of disease in their structure. But from the high degree of inflammation which takes place, the mucus lining of the trachea & its branches are so affected as to produce a purulent secretion. Another peculiarity of this form is, that it is never attended with hæmoptysis in any stage, & the matter expectorated is generally unmixed with blood, or if at all

tinged, it is only with small streaks, occasioned by the rupture of a vessel on the inflamed surface.

As relates to the treatment, I have not a great deal to say. Most of the remedies already mentioned appear to be indicated also in this species of the complaint. Being, however, more inflammatory in its nature, & occurring in a state of the system more robust than the scrofulous consumption, it calls for a more copious employment of all the depleting measures, & these may be carried to a great extent with perfect safety & unequivocal utility. Of the whole of them I so fully treated in the former lecture, that they need not again be mentioned by me. But it is right for you to know, that in one or two particulars, the practice is somewhat different. I am confident that in catarrhal consumption **emetics**, so much employed by some in consumption, generally, are far the most effectual: & I would always recommend them to be steadily used, after the inflammation has been subdued by the more directly depleting remedies.*

But the best course of treatment is to place the patient under the **impression of mercury**, & to continue this impression moderately for several weeks. This is the case in which **salivation** should

be invariably prescribed; as, even where it is not effectual, it never causes any detrimental or troublesome consequences.

## Apostematous Consumption.

To the two preceding species a third may be added which is exceedingly common in cold climates, & hence is very prevalent in certain portions of our country. In all cases it may be considered as the consequence of pneumonick inflammation. From the abscess in the lungs which always sinks it is called apostematous consumption. There is so little difficulty in distinguishing it, that it is unnecessary to dwell on its history. Being occasioned by pleurisies, wounds, contusions, & other causes of active inflammation of the lungs, it may always be suspected when there has previously been any such disease or accident. But the symtoms are also different. A case of apostematous consumption is attended with a deep seated pain which is fixed in some one part of the chest, while the pain in the other species is changeable & fluctuating. There is constant dyspnoea & oppression & the cough is extremely violent Much mucus & phlegm is expectorated till the abscess ruptures.

* which may be known by rigors,

The treatment, at least in the early stage, is precisely similar to that which is employed in the catarrhal species. The object is to prevent the formation of an abscess, & this must be done by subduing inflammation by an energetick employment of all the measures best calculated for this purpose. It is here that from the very commencement of the attack we are to employ **mercury** for **salivation**, totally regardless of the state of the pulse, & the other symptoms of inflammatory action. Of all remedies mercury is the most effectual in suppressing inflammation in the great viscera, as we habitually see in the liver, spleen, kidneys, & certainly not less so as regards the lungs. Its efficacy, indeed, in the last case, is so great, that I resort to it as a means of success in all obstinate pleurisies; & I am not certain that the remedy, under any circumstance, more advantageously displays its powers. Do not, therefore, neglect a salivation in this species of the disease, as the diligent use of mercury is of vast moment in the treatment. The abscess, however, being formed, it is important to discharge its contents, & afterwards to heal the ulcer. It commonly ruptures spontaneously: but when this does not happen & there is an urgent necessity for the rupture we may accom-

When the abscess projects externally it may be punctured.

plish the desired end by the administration of an emetic. But, in some cases, even after the abscess has bursted, not unfrequently the lungs are inflamed, & the dyspnœa & other distressing symtoms continue as before. It is here desirable to procure expectoration: & this is best effected by the inhalation of the vapour of warm water or vinegar, or what is infinitely to be preferred, the vapour of ether as formerly mentioned. Every part of the subsequent treatment in this case is so analogous to what has been already mentioned in tubercular consumption, that any further mention of it becomes superfluous. But I cannot refrain from remarking, that in some cases of apostematous consumption, I have derived so great advantage from a mixture of nitrick acid & ammoniac, that I wish to press it particularly on your attention. Whether it is by the virtues of the nitrick acid, or of the other ingredient, I cannot determine. But that the preparation is beneficial by mitigating the cough, dyspnœa, & other symtoms there is no doubt, nor is it at all doubtful from the known properties of nitrick acid, that it is moreover extremely useful by promoting the healing of the ulcers. I have before shown that it produces such an effect in some very obstinate cases; & I see no reason

x Opium is very useful & should be liberally exhibited –

why it should not operate in the same way with regard to ulcers of the pulmonary organs.*

After all, however, though occasionally the last two forms of consumption are cured, even in the last stage, yet it is our duty to attack the complaint as soon as possible, & even adopt such measures as will tend to hinder its occurrence.

The 1st step in this prophylactick course, is, generally, to recommend the removal of the patient to a more favourable climate. By the general consent of practitioners, a climate dry, temperate, & generally equable was selected for the purpose. But of late years, this long & universally received opinion has been questioned & the practice, of course, controverted. In one of my lectures on pathology, I remarked that the practice of Dr. Bond, a distinguished physician of this city, was to send his patients into miasmatick countries with the view of counteracting the disease, or the tendency to it, by inducing ague & fever. What was the result of this extraordinary expedient, I cannot exactly say; though it appears from traditional authority, that it was not without benefit. The precept taught by some medical men of England, is that the action of intermittents is an incompatible one, & when it is completely established, all other actions, and

especially the action of consumption, is suppressed & removed. It is called, in the language of one of these writers, "a despot who will bear no brother near the throne". To support their doctrine, in the first place they attempt to show, that throughout the world, where fever & ague to any extent prevails, every other complaint vanishes; & this they assert is true as regards England. Thus in the country of Devonshire, by far the mildest & most temperate in Great Britain, consumption prevails to a great extent, while there is not a solitary case of fever & ague. On the other hand, in the county of Lincolnshire, where there are frequent sources of marsh miasmata, & where fever & ague exist even to a desolating degree, pulmonary consumption is entirely unknown. Nor do they limit the sources of evidence to their own country. On the contrary, extending their researches over Europe, they find every where, or, at least, pretend to find, confirmation of their sentiments. Thus, in Holland the ague & fever is prevalent to a great degree: but it is stated positively, that pulmonary consumption is among the rarest of complaints. I recollect that by Dr. Logan, who practiced in Holland, the same remark was made, in a work

which he published 20 or 30 years ago. The same is said to hold in flanders & other parts of Europe. The fact that ague & fever prevail through Egypt, while consumption is entirely absent, goes to confirm the same opinion. But the strongest evidence is afforded by Italy. It is known to you all that the climate of this country is by far the most equable & temperate in the world. It is said by the writers to whom I refer, that in those parts which are gifted with perpetual serenity & perennial brightness, consumption prevails to an alarming extent; but in the fenny districts of the same country, & especially in the parts where rice has lately been cultivated, and which, of course, are occasionally overflown, ague & fever prevails & consumption is wholly unknown. Notwithstanding, however, all this accumulation of evidence, I do not wish to press the opinion on you. Before surrendering up an habitual prejudice in favour of any practical doctrine, a doctrine too, sanctioned by the lessons of immemorial experience, we have a right to require that facts of an indisputable nature should be advanced against it. Till facts of this nature are adduced, we should hold fast that ground which practical experience tells us is perfectly sound.

At the close of the lecture of yesterday, I was speaking relative to the description of climate most favourable to consumptive patients. It appears from what was said on that occasion, that though there is little doubt that a mild & equable climate is preferable in this case; yet it is exceedingly difficult to determine the exact spot to which it would be best to send your patient. It seems from indubitable testimony, that many places to which we have been in the habit of sending our patients, are liable to the disease, & perhaps little can be gained by a change of residence. No part of France is entirely exempt from this complaint. It abundantly prevails in Paris, Lyons & Montpelier; the two last of which are much resorted to by the infirm & valetudinary. Nor is the case different as regards Naples, Rome, Venice, Leghorn, or, indeed, any one position in Italy. And even Lisbon & the island of Madeira, so greatly celebrated as resorts for consumptive patients, constitute no exception to the remark. After a great deal of inquiry, the south of Spain, & particularly in & about Valencia, has been selected for this purpose. As regards our own country, some one of the West India Islands, & Bermuda more than the others, is commonly chosen. But no one of

them is exempt from consumption, & Bermuda is particularly liable to it, from its exposure to the sea, occasioned by its diminutive size. Any one of the larger West India Islands will answer very well, & is the best place to which the patient can be sent. I believe it is pretty accurately ascertained, that there is no section of the United States in which the disease is not met with; though it abounds the most along the sea coast, & especially in New York & the Eastern States. It is right, therefore, to recommend the removal of your patient from these situations to some spot less exposed to the complaint. But so exceedingly variable is every part of our climate, that it is hardly safe to trust a person attached with pulmonary consumption, any where within our limits. To the interior of Georgia & New Orleans there is the least objection. But even there the weather is not without vicissitudes, & there is great hazzard, unless care & circumspection are used, considering, on the whole, the numerous inconveniences & difficulties on a change of residence to a distant place, & the equivocal advantage of it in many instances. I do not know whether the confinement of the patient, at home, in a room

of a properly regulated temperature, is not to be preferred. The temperature should be from about 60° to 65°. It is true that much is ascribed to the effects of a sea voyage, & perhaps, justly, when resorted to in the early stage of the disease. But if the case is advanced, this remedy is destitute of efficacy, & I have more than once known death to be caused by the hardships & exposures of a sea voyage.

As a part of the preceding plan, exercise regularly & moderately taken, especially on horse back is much celebrated, & its importance is fully recognised. It was recommended originally by Sydenham, who spoke favourably of it in terms more confident than he was accustomed to employ; &, so far as I know, all subsequent experience concurs to support his opinion of the remedy. But this, like every other part of the treatment, must be regulated by discrimination & judgment. Being highly stimulant & tonick, it should never be resorted to while the pulse is full, & much inflammatory diathesis prevails. Employed in this condition of the system, it often occasions hæmoptysis, & accelerates the march of the disease. But when the patient has been properly prepared for it, then exercise on horse back is one of the most important remedies, and deserves all

the praise which has so long & so generally been confered on it. Riding over low marshy ground will sometimes be of advantage, when an elevated country & pure air would pernicious.

After all, however, little advantage will be gained by any course of treatment, unless the diet be strictly regulated. By the common consent of practitioners, that food should be prescribed which is light & of easy digestion, without the slightest tendency to heat or stimulate the system. No course of living is better suited to this complaint than milk alone, or united with the farinaceous articles, & hence a milk diet has been immemorially recommended. The lichin Islandicus is also very good.

To conclude the prophylactick plan, I have only to add that all the exciting causes should be studiously avoided, & above all an exposure to cold, which must be guarded against by wearing flannel, at all seasons, next the skin.

With this I close the history & treatment of pulmonary consumption. It will be recollected, that, of the three leading forms, I have pronounced one, (& I apprehend on the authority of the medical world I have pronounced it,) to be wholly incurable. Of the two other cases of the disease, though now & then we do accomplish

cures; yet these are exceedingly rare, & we enter on the treatment with little confidence of ultimate success. It is, therefore, one of the highest & most sacred of our duties, to prevent the formation of the disease, & with this view, uniformly to attack it in its early stage. The experience of every physician warrants the conclusion of the incurable nature of Tubercular Consumption, & that, although cures of the other forms of the complaint are occasionally affected; yet even here, we cannot place entire confidence in our remedies.